

The International Management Forum of the Global Electric Power Industry

PRIVATE POWER EXECUTIVE

A Pequot
Publication
January-
February 1999

K&M/KMR GROUP:
Consultants Tackle Global
Infrastructure Problems



Multilateral and Government Advisory Services Open Global Power Development Doors

The K&M group of companies holds a decidedly competitive edge in the global power development market of the future ... attributing its success to the ability to structure sound projects that reach financial close.



K&M/KMR executives have successfully combined individual skills and expertise of their separate companies into a formidable international power development organization. (Left to right) William Drotleff, Michael Kappaz, George Kappaz, and George Stockton.

Barely into its second decade, Washington-based K&M Engineering and Consulting Corporation and its sister company, KMR Power Corporation, have created a formidable international power development and consulting organization.

Michael H. Kappaz, Chairman/CEO of K&M Engineering and Chairman of KMR Power, attributes the group's success to its ability to structure sound projects that reach financial close. KMR's growth has paralleled K&M's with the two companies drawing upon each other's strengths.

"We are unique in the industry, having participated in power projects from each perspective of a transaction. Over the years we have served in the full range of roles as project developer, equity owner, financial and project structuring advisors, construction and project manager, owner's engineer and banker's engineer.

In addition, we have served as consultants in the areas of privatization, institutional and policy reform, as well as structured, tendered and negotiated independent power projects (IPP), build-own-operate (BOO), and build-own-operate-transfer (BOOT) projects. This broad base of expertise puts us at the forefront of the private power sector of the future," comments Michael Kappaz.

To date, K&M/KMR have procured, structured, designed, managed, or developed more than \$8.5 billion worth of infrastructure projects throughout the world including over 8,000 MW in power generating facilities (5,000 MW of which is private power), more than many of its older and larger competitors.

And, in doing so, K&M/KMR have amassed an impressive list of firsts in the global power development sector:

- *First* independent power projects in Latin America, the Middle East, North Africa, West Africa and South Asia.
- *First* greenfield power project with 100 percent commercial underwriting, without government guarantees.
- *First* non-recourse financed greenfield power project in Latin America.
- *First* World Bank guarantee for a private power project.
- *First* direct loan for a greenfield project from the Inter-American Development Bank.
- One of the *first* (if not the *first*) project that sells to a utility and to the spot market, as well as directly to industrial consumers, without government guarantees.

Executive Interview

Power Roots

The concept to establish K&M was born in the early 1980s when its founder, Michael Kappaz, was developing one of the first BOTs in the electric power industry. Reflecting on K&M's beginnings, he says, "It seemed obvious, given the tremendous need for power generation capacity worldwide and lack of local financing for such capital intensive development, that the private sector would have to step in."

"However, before the private sector could participate, it needed credit enhancing instruments, proper legal and institutional frameworks and a rate of return commensurate with the risks." Mr. Kappaz points out that traditional lending called either for sovereign guarantees on 100% of the loan, or balance sheet financing, in the case of a private developer.

He recalls, "We felt that in order to attract private sector investors a fresh, creative approach was required. We set about to assemble a fully integrated team that understood the intricacies of the infrastructure development industry, yet could think 'outside-the-box.' We were convinced that in order to succeed in this young, evolving private power industry, the way to go was to combine technical and financial expertise within one company capable of structuring competitive, commercially viable projects."

"As a result," says Kappaz, "K&M was formed to pursue work in this rapidly growing market and promote private capital investment in the world's emerging nations power facilities."

Initially K&M leveraged two things:

- Sound technical expertise of engineers and construction managers with extensive experience in the power sector.
- Thorough understanding and affinity for the complex financing instruments and risk mitigation strategies required.

"At the time, such a combination of expertise within one company was unique in the industry, and is still a rarity today," says Kappaz.

Since first opening its doors in January 1987, K&M has advised more than 35 client countries on a range of



Michael H. Kappaz, Chairman and CEO of K&M Engineering and Consulting Corporation and Chairman of KMR Power Corporation, is an internationally recognized authority on structuring, financing, and managing complex infrastructure projects. Prior to founding K&M, he was Vice President and General Manager for International Operations with Bechtel Power Corporation. Kappaz earned an MBA in Finance Management from Golden Gate University and a BS in Industrial Engineering and Operations Research from the Polytechnic Institute of New York. He has completed graduate work at the Wharton School at the University of Pennsylvania, and at Stanford University.

issues relating to power plant engineering and construction, privatization, electric sector restructuring and commercialization, legal and financial framework development, and BOO/BOT project tendering.

"We are committed to supporting the development of new infrastructure and its privatization process as a long-term strategy," states Michael Kappaz.

William Drotleff, K&M's Senior Vice President, says "K&M's work has left an imprint on the private power sector and provided a road map for projects that are financeable. This has set the stage for an influx of new BOO/BOT projects in the pipeline worldwide. On every continent attractive investment environments are opening opportunities to the private

sector. Sponsors can move forward, secure in the knowledge that the fundamentals are in place."

Sound Documentation

"With regard to the emerging economies," says Drotleff, "unfortunately, nine out of ten of their power projects fail to reach financial close. The principal reason, in our judgement, is lack of sound documentation, financeable agreements, and transparent legal and institutional frameworks. Often, even in advanced countries, the documentation tends to be so poor that we choose not to respond to the bidding packages. They're just not financeable, no matter how tempting."

In the early 1990s, recognizing K&M's thorough understanding of the key elements required for a successful private power project, the World Bank called upon K&M to write its guidelines for *Submission and Evaluation of Proposals for Private Power Generation Projects in Developing Countries* that have been applied worldwide and led to standardization of procedures.

According to Michael Kappaz, "Our decision to become involved in a particular project is based upon the fundamental strength of the project itself. From the outset, sound project fundamentals must be addressed. Does the project make good business sense? Is mature, proven technology being used? How long before cash flow and completion? Is there ample debt coverage? Do all project risks have a home?"

"Adherence to these fundamentals has helped us to carefully select projects with the strongest potential for success," says Kappaz. "If we find a power project where the economics make sense and the deal is financeable within a reasonable time, then we aggressively pursue it, regardless of its location."

"Some companies in this business," he says, "determine whether or not to pursue a project on a red, green, or yellow ratings basis. Thus, if they're not active in Africa they don't go there; if they're not active in Europe, they don't go there. Our approach differs. We are deal-oriented, rather than country-oriented."

Power Project Development

While K&M's first assignments were in engineering and construction management of power stations, the company soon landed larger assignments. This led to a key role in the development of the 1,292 MW Hub Power Project in Pakistan. K&M was hired to structure and manage the Hub project, which at the time, was the largest private power transaction in the developing world.

"Faced with numerous obstacles, the sponsors approached K&M to assist in putting the complex transaction together, and get it back on the right track," Michael Kappaz recalls. "We promoted and secured an innovative financing package, including the first private power project guarantee by the World Bank. This new instrument—the Partial Guarantee Program—is now widely used and guarantees the obligations of the government, including the power purchase agreements, fuel supply agreements, and so forth."

He adds, "The Hub Power Project brought to bear the full complement of K&M's expertise in the areas of project and finance development, as well as project and technical management. K&M was not only the leader of the development team, but also the technical and site manager throughout the project's construction stage."

Power Development Spin-Off

Following its initial success in power development, K&M then landed the 100 MW, combined-cycle gas-fired Mamonal Project in Cartagena, Colombia as managing partner and project developer. Michael Kappaz says, "The Mamonal Project was the first to use 100 percent commercial, non-recourse financing to develop an emerging market greenfield power plant. Project loans were obtained strictly based on the cash flows of the project, without government or multilateral guarantees. In a reversal of roles, the private sector guaranteed the public sector. (Part of the electricity which was sold initially to a public sector entity was guaranteed by the private sector offtaker.) The Mamonal Project closed just as our management had predicted and began commercial operation



George M. Kappaz, President and CEO of KMR Power Corporation, launched KMR in 1994 after serving as Vice President of Project Development and Finance for K&M Engineering. Earlier he served in international corporate finance with Standard Chartered and CitiBank, and as an engineer with Bechtel Power Corporation. Mr. Kappaz completed his graduate studies in finance at the Bocconi University in Milan, Italy, after having earned his engineering degree from Rensselaer Polytechnic Institute.

in July 1993. Mamonal was a successful project recognized as 'Deal of the Year' by several industry and banking organizations."

One of the equity partners in the Mamonal Project was a Rockefeller entity. "They appreciated our innovative approach," Michael Kappaz says. Realizing that the structure used for Mamonal could be a model for similar ventures, Rockefeller & Company approached K&M about forming a separate company.

As a result, in 1994 K&M Ventures (a separate project partnership from K&M Engineering) and Rockefeller & Company formed KMR Power Corporation for the express purpose of developing, owning

and operating power facilities worldwide.

George M. Kappaz, Michael's son, led the development of Mamonal for K&M Engineering and today is KMR Power's President and Chief Executive Officer. Elaborating on his father's comments, George Kappaz says, "KMR is a global generation company that develops, owns and operates electric energy projects. We began with a proven track record and the confidence of our business partners on the potential to succeed in similar ventures around the world. And, in just five years, we have earned a reputation for successful development of unique projects under difficult circumstances in exciting locations."

"KMR's close affiliation with K&M makes us, in my view, unique in the industry. While KMR is a separate company from K&M, with its own board, financing, and ownership, we are able to capitalize on the individual skills and expertise the two companies bring to a project." When KMR entered the picture," George Kappaz says, "K&M agreed that KMR would handle power development, and K&M would support KMR technically."

Focused Strategy

Although electric power development has been around for 100 years, it is today very much a new and constantly evolving business, barely recognizable compared to even a decade ago. As George Kappaz points out, "major private power players, including utility, fuel and equipment businesses, are a hybrid of the old order. KMR, on the other hand, "is strictly in the power development business." "We're not distracted by being in other lines of business as many of the new players are. We don't have conflicting agendas," he adds. "We focus exclusively on the best applications for a particular project. This invariably leads to stronger commercial structures better suited to hold up over the long term."

Executive Interview

Industrial Growth Driving Demand

In explaining KMR's strategy, its Vice President and Chief Financial Officer Denis M. Slavich, says, "Each country's electrical power needs differ. Some require capacity for their utilities, others for their industries. What you need in any country is a lynchpin of creditworthy companies."

"We tend to focus toward the industrial sector as a starting point in developing a project—as a way to support the power that will be generated. It is absolutely essential to have key industries stand behind a project. And, it is to the government's advantage to bring investment to a country by utilizing its existing creditworthy base. Resolving the country's power problem by fostering its industrial sector participation secures the power that a country needs while freeing up money to address problems elsewhere in the economy. This translates into a 'win' for the government, a 'win' for its people, and a viable business opportunity for us."

George Kappaz cites KMR's current project in Ghana as a good example of an emerging market country opening up its power sector to private investment. The 220 MW gas-fired, combined-cycle power plant, known as the Ghana Industries Power Project, is being developed under a build-own-operate agreement in consortium with Emerging Power Development Ltd. of the US.

"Ghana," he says, "is putting into place the legislative and regulatory framework needed to promote expansion in the sector—expansion to be fueled by private capital. Ghana is not 100% there yet, but its goals are consistent with ours, and we have structured a commercially viable project under existing conditions."

"In comparison," says George Kappaz, "Colombia's regulatory framework today is mature, with open access transmission and a spot market for energy. When we structured Mamonal none of that existed, but a law indicating an intent to move in that direction did. We completed the project using our creativity and vision."

"KMR will do the same in Ghana," he says. "The similarities between the Ghana



William C. Drotleff, Senior Vice President of K&M Engineering, is responsible for operations and technical activities. Prior to joining K&M he served as President and CEO of Cogeneration Partners of America, and Vice President of Stone & Webster Engineering Corp. Drotleff earned a BS in Engineering from the US Naval Academy.

Industries and Mamonal projects are striking. Ghana is a country where private industry needs power, particularly in the mining sector—the centerpiece of its economy. The country's economy is growing rapidly and needs new generation facilities to sustain that growth thus offering a perfect opportunity for our company."

George Kappaz points out "while that strategy often takes good customers away from the national utility, governments realize that their country's future depends on reliable electricity. Because increased efficiency and reliability, as well as supply to meet growing demand, are required by local industries and the country in general, it is to the government's advantage to allow and encourage private power generation. This, in turn, enables a country to effectively implement much needed capacity."

"There are no cookie-cutter approaches to these projects," says George

Kappaz. "Every country and every project must be approached anew. All project fundamentals and agreements must address the issues unique to each situation."

Beyond Power

Looking to the future, Michael Kappaz envisions the K&M group of companies expanding its equity investments beyond the electric power sector to encompass water and wastewater systems, advanced environmental technologies, and telecommunications.

"K&M intends to build upon its pioneering role in the creation of the Build-Own-Operate (BOO) and Build-Own-Operate-Transfer (BOOT) private power financing concepts. In this highly competitive, capital intensive industry these concepts are undergoing dramatic changes, evolving into hybrid forms to meet the unique needs of investors structuring projects in a wide variety of conditions."

"Our goal, says Michael Kappaz, "is to become top international infrastructure developers. I envision the K&M group of companies applying the same principles of innovative engineering, creative financing, and conceptual project development that we have successfully used in the power industry to all areas of infrastructure."

"We have a ten year history in the telecommunications business that we intend to capitalize on, perhaps to include ownership interest in future projects. Our telecommunications subsidiary, KMTel, currently owns a license in the U.S. Personal Communications System (PCS). In addition, as our work in the water and wastewater sector expands, we envision another spin-off to capture new international and domestic opportunities," he adds.

"Our mantra for the future," Michael Kappaz concludes, "is to build upon our success in the power industry and bring the lessons learned to new sectors. Opportunities arise quickly in today's world and other avenues will certainly open to us as we continue to grow. Therefore, we must remain aware of the advancements in technology that create new commercial opportunities for companies like ours."

Research and Development Programs

Since 1991, K&M Engineering and Consulting has provided technical support services on a variety of advanced technology assignments to the Federal Energy Technology Center (FETC), the R&D division of the U.S. Department of Energy (DOE). FETC manages and implements a broad spectrum of energy and environmental programs.

- Development of commercial-scale circulating fluidized bed (CFB) systems and integrated gasification combined-cycle (IGCC) systems.
- Conducting international market assessments for advanced power generation technologies.
- Technology assessments and commercialization strategies for advanced fuel sources, such as clean coal, solid fuels, and gasification.

K&M was selected to independently analyze the technical, economic, and management components of the Plutonium Stabilization and Handling System, the Tritium Extraction Facility, and the Accelerator Production of Tritium projects at DOE's Los Alamos, Savannah River, and Hanford sites, and provide recommendations for mitigating potential deficiencies.



K&M Engineering and Consulting Corporation
2001 L Street, N.W., Suite 500
Washington, D.C. 20036
(202) 728-0390 phone
(202) 872-9174 fax
www.kmec.com

Chairman and CEO
Michael H. Kappaz

Senior Vice President
William Drotleff

Director of Marketing
George Stockton

KMRpower

KMR Power Corporation
1000 Wilson Boulevard
Suite 900
Arlington, VA 22209
(703) 247-3500 phone
(703) 276-1515 fax

President and CEO
George M. Kappaz

Vice President and Chief Financial Officer
Denis M. Slavich

Director of Corporate Communications
Julie Kennon



Mamonal Power Station, a 100 MW natural gas-fired plant in Cartagena, Colombia, was the first project-financed greenfield power facility built in Latin America, with development and financial closing taking just eight months from project award.