



BLACK & VEATCH

Capturing Opportunities in a Promising Market

World Energy interviews Bob Germinder, President of Black & Veatch's Gas, Oil & Chemicals Division



The demand for clean, affordable energy continues to grow worldwide. Advancing technologies are playing a significant role in meeting the demand while offering market-changing environmental benefits. The future is promising – in particular for Black & Veatch, a leading global engineering, consulting and construction company that provides unique capabilities in gas processing, liquefied natural gas and sulfur.

World Energy: Let's start with some background about Black & Veatch's process capabilities.

Germinder: Our Gas, Oil & Chemicals business is technology oriented. We provide engineering, procurement and construction [EPC], licensing and design capabilities in gas processing, liquefied natural gas [LNG] and sulfur recovery. In 1985, Black & Veatch acquired the Pritchard Corporation, whose history extends back to the early days of the gas processing business in western Kansas. This included purchase of the PRICO single-mixed refrigerant LNG technology, which, known as PRICO II,[®] is serving Black & Veatch well today. Our know-how allows us to deliver greater value to clients worldwide in terms of optimum plant configuration with low life-cycle costs.

World Energy: How strong is your market?

Germinder: Opportunities are plentiful. Dozens of LNG projects are currently under consideration for the United States; of those, perhaps six will actually be built. Black & Veatch is well positioned to support many of these projects based on our proprietary LNG technology, which enables us to put forward a good value proposition on regasification and import terminals. Additionally, we are helping clients obtain all necessary permitting and regulatory approvals.

The LNG market is also expanding worldwide, and Black & Veatch is helping to lead the way. We are involved in projects where LNG is being used as an alternate vehicle fuel as well as an alternate fuel in power generation. An additional growth area for us is the LNG peak-shaver market, where our technology offers a good value solution to clients. Current projects, awarded or bid, range from China and Malaysia to Brazil, Chile and the United States.

Sulfur is another emerging market where Black & Veatch has extensive experience. Sulfur management ties in with both gas and oil production, where reserves are increasingly more "sour" with sulfur. There are huge stockpiles of recovered elemental sulfur that need to be managed, and we have done a good job of sulfur recovery stemming from emissions regulations. We expect strong growth in this segment. Our STEP[™] process, which converts sulfur to power, is a breakthrough technology as part of overall sulfur management.



No limit goes unchallenged. No problem goes unsolved. With integrity and innovation, Black & Veatch develops solutions that help clients achieve their goals while creating value for their enterprise.

World Energy: Can you give us an idea of the scope of these opportunities?

Germinder: The opportunities are both geographical and technical. The gas processing market is quite large. Conservatively speaking, it's worth about \$12 billion a year. Key countries include Russia, Iran, Qatar, Saudi Arabia, United Arab Emirates, Algeria, Libya and the region surrounding the Caspian Sea. To the extent that the gas is sour, this will also drive the sulfur recovery processing business. LNG is another large market, with each EPC project worth in the \$500 million to \$1.5 billion range. We also are seeing a strong interest in gasification and gas-to-liquids technologies. To that end, we are forming alliances with key technology partners.

World Energy: What are the challenges in capturing these opportunities?

Germinder: The market is fragmented. While it's true that there is plenty of work to screen and bid, the gas and sulfur projects we are talking about are world-scale, involve hundreds of millions if not billions of dollars and are in regions of the globe where operations can be extremely challenging. Despite our expertise, we simply can't go it alone. That is why we have adopted a focused approach to our pursuits, leveraging Black & Veatch's full-service capabilities as well as our strong alliances with industry leaders.

World Energy: How does this focused approach serve clients?

Germinder: Simply stated, we are looking to add value and to improve customers' assets and investments. We bring technical expertise and relationships with value-added partners. We also have proven, global project management capabilities in power generation and power delivery as well as the gas, oil and chemicals business. Focusing our diverse, full-scale resources, we can deliver the right value-added solution to meet our clients' challenges.

About Black & Veatch

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Black & Veatch is a leading global engineering, consulting and construction company specializing in infrastructure development in the fields of energy, water and information. Working from more than 90 offices worldwide, the company provides conceptual and preliminary engineering services, engineering design, procurement, construction, financial management, asset management, information technology, environmental, security design and consulting, and management consulting services. Founded in 1915, Black & Veatch is an employee-owned company. The company's Web site address is www.bv.com.

Meeting clients' challenges with innovative engineered solutions, the Gas, Oil & Chemicals (GOC) Division helps position Black & Veatch as a leader in the energy industry. GOC leverages more than 80 years of experience to provide superior technology, engineering and construction services to the natural gas processing, sulfur recovery and LNG markets.



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