Back to school for energy traders

The University of Houston has opened an energy risk management school. But, asks Kevin Foster, what will students really learn about the industry’s Enron-inspired problems?

The University of Houston’s new Global Energy Management Institute (GEMI) has been getting support from the very top. Speaking at the formal launch of GEMI and its risk management programme on August 14, Federal Energy Regulatory Commission chairman Pat Wood told his audience: “The mission of the Global Energy Management Institute is part of a long-term industry solution that we all endorse for the demanding journey toward competitive energy markets.”

From August 27, GEMI has been offering an energy risk management certificate designed both to train aspiring traders and enhance existing traders’ skills, at a cost of $9,750, and the founders of the institute are relishing their evangelical role.

Arthur Warga, dean of the Bauer College of Business at The University of Houston, says: “We saw there was not a recognised training ground for people wanting to carve out a career in the energy industry, or even for existing energy traders who wanted to get up to speed with the latest technology and trading practices. Our aim is to develop a school for the energy trading industry.”

Warga acknowledges that launching the programme in the current stormy climate is a big risk. But, he says: “We believe strongly that deregulated energy markets will last, and that energy trading will play an even more important part in them in the future. We need to prepare the future leaders of the industry.”

Cynics will quickly point out that the GEMI programme (see box) does not include a module that focuses specifically on the financial problems of Enron. But Warga says: “I am very cautious about drawing conclusions from Enron. I think we’re at least a year away from knowing what really happened at the company.”

And while the collapse of Enron is not necessarily being tackled head-on, students will be left in no doubt that lessons from the bankruptcy will be learned. Praveen Kumar, professor of finance and chair of the finance department at The University of Houston, is that a risk-hungry business strategy must be paired with conservative accounting principles. “Enron ran a significant level of risk throughout its business, not just in its trading operations. Take its investments [in the Dabhol power plant in India] and its failed broadband unit, for example,” he says. The Dabhol power plant was plagued by contract problems and disputes over rates, and has been idle since June 2001.

“It also used very aggressive accounting,” he adds. “Our students will learn how to assess risk across the totality of the business portfolio.”

Despite the current unfavourable employment market, Warga believes GEMI will be producing the kind of graduates that energy companies will really need. He sees hiring practices changing as a result of the upheavals of recent months.

Lack of expertise

Previously, energy trading firms seem to have been content to hire traders without college degrees or to transfer existing staff from other business areas to the trading floor. But there is now a growing recognition that traders’ lack of knowledge of the specifics of energy trading – notably the physical basis of many of the derivatives they were trading – might well have played a role in the crisis.

Robert Brandenburg, a partner at consultants Cap Gemini Ernst & Young in Houston, takes this view. “Our clients are constantly telling us they are looking for trading staff who are familiar with the complexities of the energy industry – for example, the difference between trading physical commodities and financial instruments – and they’re having difficulty finding qualified people,” he says.

Warga says about three quarters of the first intake of students are already working in companies in the energy industry. They include analysts and risk managers from energy firms Cinergy, Duke Energy, Chevron-Texaco, Reliant Energy and others. And students from end-users outside the energy trading sector are also signed up for the certificate, including employees of Pepsi Bottling Group, industrial gas company Air Liquide and, in one case, the US Navy.

Lucy Ortiz, a natural gas buyer at Cinergy, is one of five of the company’s employees who successfully competed to get on the course – 32 Cinergy staff had originally applied. She says: “With everything that has happened recently in the energy industry, it’s important to have a recognised certificate of mastery in energy risk management, to increase confidence in the sector. I think our customers will feel more secure dealing with staff who have this qualification.”

At undergraduate level, GEMI offers a five-year degree course in which students can obtain a bachelor of business administration (BBA) degree in energy markets and a master of science (MSc) qualification in energy finance. In future, graduate students will also be able to pursue specialised certificate degrees in energy risk management, international energy project finance or energy accounting.

However, The University of Houston’s Kumar sees a broader role for GEMI than the certifying of traders and energy industry executives. He says GEMI will aim to foster a dialogue between academia and the energy industry, hosting seminars and forums on topical industry issues. “We’re providing a neutral venue where energy leaders can exchange ideas, share common experiences and identify new approaches to key problems,” he adds.

GEMI is also setting up an energy research centre, which will, for example, examine the potential for securitisation and other financial techniques that could reduce the cost of capital for projects such as deepsea natural gas exploration and production.

The institute also plans to set up an energy trading room for students to use in autumn 2003 and is looking for a software vendor to work with on the project.

But it is when GEMI graduates complete their course that they will come up against their biggest obstacle. John Miller, associate director of career planning at the Jones Graduate School of Management at Rice University in Houston, believes the steady procession of energy majors pulling out of trading this year has meant that good jobs have become harder for Rice graduates to find.

“The current market is fairly saturated with experienced traders who have been laid off from Enron, El Paso, Williams, Dynegy and...
others, so it will be difficult for just-graduating students to pursue a trading career,” says Miller. In the past, about a third of Jones Graduate School students went on to work for energy companies. But the few students who have entered the trading business this year have tended to focus on what Miller says are the better-capitalised companies, such as oil majors BP and Shell and Charlotte, North Carolina-based Duke Energy.

However, Miller does not believe the bad publicity being heaped on the energy business will permanently discourage students. “I do think they are offended by the apparent [lack of] ethics shown by some of the employees at some energy firms, but they are perceptive enough not to damn the whole industry on that basis,” he says. “My guess is that after a period of consolidation and re-capitalisation, the market for traders will re-emerge.”

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**On the GEMI curriculum**

The University of Houston’s Global Energy Management Institute’s (GEMI) inaugural energy risk management programme, which starts this autumn, offers a six-module course designed to educate students in the complexities of global energy markets. The course is open to existing University of Houston MBA students and selected graduate level applicants. The course covers the following:

- **Introduction to the energy industry and markets**: a survey of energy resources; industry infrastructure and regulatory developments; methods of analysing and forecasting energy markets; energy derivatives in risk management; the role of the New York Mercantile Exchange and electronic exchanges; price and credit risks.
- **Financial statement analysis for the energy industry**: overview of the oil and gas industry and Securities and Exchange Commission announcements that guide acceptable accounting practices; specific emphasis on FAS 133 requirements.
- **Financial engineering and derivatives**: introduction to stochastic processes; economic properties of option pricing and the Black-Scholes pricing formula; design of hedging strategies, arbitrage and exotic securities.
- **Real options, valuation and project analysis**: the theory and application of real options in the energy industry, covering both conventional approaches and more recent developments; the theoretical and applied treatment of the estimation of cashflows and cost of capital in the energy industry.
- **International financial risk management**: overview of currency, equity, international bond and derivatives markets around the world, with a strong emphasis on hedging techniques and tools used to reduce risk associated with international financial and portfolio management.
- **Energy derivatives and risk management**: survey of spot, futures, swaps and derivatives trading in natural gas, petroleum and power markets, including spread, swing, Asian options and dynamic hedging; discussion of asset-based hedging and risk management strategies using value-at-risk and other more advanced approaches; examination of forward price curve characteristics and determination, particularly volatility estimation and analysis.