Power, Water and Risk Management

By Thomas Rietz

January 15, 2015

The University of Iowa’s Utilities and Energy Management group knows its role is “mission critical” to the University. They provide water, electricity, steam, heating and cooling to the campus of a major research university and to the University of Iowa Hospitals and Clinics, the state’s only comprehensive academic medical center. The utilities infrastructure is also a critical risk management tool for the University and the Hospitals. Losing power, even for a relatively short period of time, could be catastrophic.

The utilities are also costly: the facilities represent a major investment for the University. Does it represent an efficient investment? How much is the Utilities operation worth to the University? How much should the University invest to manage the risk of power outages? These are challenging questions that require expertise in finance, risk modelling and risk management.

To answer these questions, the University turned to the Tippie College of Business where a team of MBA students performed an analysis. First, they created a baseline valuation for the utilities from an outside perspective. Then they considered the financing, revenue and investment structure of the University. Last, they turned to the risk management role of the utilities. They estimated both the value of risk management and asked whether investment in risk mitigation is worth the cost.

The basic utilities operations do create value for the University. But the real value lies in risk management; it far exceeds the basic operational value. Why? While the modern US utility system is extremely reliable, the special situation of a research university and hospital make potential losses extremely high. Thus, reducing even a small risk across time is enormously valuable. This provided a “great tool to evaluate the UI Utility’s net worth,” and “presented to the UI community the important steps Utilities takes for risk management and the impact that has on the value of our Enterprise,” according to Marla Johnson, Sr. Energy Financial Analyst and Glen Mowery, Director, UI Utilities & Energy Management.

"Working on the UI Utilities project provided an invaluable opportunity to apply classroom learning to a real-world project,” said Jim Kain, an MBA finance academy student and member of the project team. “Our team was able to show how different factors such as tax, debt, and risk management affected a critical university operation. Most rewarding was the knowledge that our team provided valuable and relevant information to our client."

Professor Tom Rietz served as an advisor to the consultant team. “This project was an exceptional learning experience for the students,” he explained. “They took a very complicated problem and boiled it down to its essence. They learned about valuing an integrated asset as part of a complex system. Further, they learned
firsthand about valuing operational threats to an institution. All of this applies to a non-profit institution working for the social good, not just for-profit businesses.”

“The students were smart, engaging, asked very good questions during the data collection and analysis phase and were very professional in how the team presented its findings to University staff,” said Terry Johnson University of Iowa Interim Chief Financial Officer and University Treasurer. “I was very impressed with the creativity exhibited by TCOB students. The students were able to present complex data graphically making it easy to understand the components of the valuation. I feel I now have persuasive and powerful data.”