

birds, and the fishing industry, which is a major industry for the area—thus eventually driving up prices for fish products for the average consumer. The tourist industry, which is very big, is getting vacation cancellations—allegedly in reasonably large numbers—which reflects another economic hit for the area. That’s worth about \$100 billion per year, according to *CNN Money*. The fishing industry is seemingly “wiped out” in certain areas for some uncertain period of time. Fishermen are probably the most directly affected by the spill since reports say the government has closed down over 20 percent of the federal waters for fishing activity.

Ben Ebenhack

Senior Lecturer in Chemical Engineering

In terms of the significance of this oil reserve, it’s clearly a promising discovery. A good initial flow rate doesn’t necessarily indicate good reserves, but the fact that the well has been flowing at a very high rate that isn’t noticeably diminishing suggests that it’s an excellent reservoir. To offer some perspective, even with the very high flow from this well, it has probably produced a total of less than a million barrels of oil—which equates to one hour of U.S. petroleum consumption.

The depth of this well guarantees very high pressures. At its depth—some 18,000 feet below sea level—the pressure would be expected to be at least 9,000 pounds per square inch—and it can be much higher than that. The formation fluid pressures are normally contained by the weight of the drilling fluid—what drillers call “mud”—in the hole. However, when gas enters the well-bore, it can push some mud out of the hole, decreasing the mud pressure, allowing more gas to flow into the well-bore. This is a self-aggravating problem. It’s controlled by the blow-out preventers, which would normally stop it before it escapes. They failed in this case. We need to assess carefully what went wrong in order to add more levels of redundancy to prevent this kind of failure again.

Unfortunately, this spill is not likely to aid the transition toward more sustainable energy, because it isn’t pushing prices up and the alternatives still can’t compete effectively against cheap oil. I would hope that it convinces Americans that we need to reduce the demand for petroleum, through conservation. **B**

—KATHLEEN MCGARVEY

COMMUNITY CONNECTIONS

‘Knowledge Base’

Report highlights the University as an example of ‘knowledge-based’ economic shift.

By Kathleen McGarvey

THE UNIVERSITY IS THE SIXTH-LARGEST private employer in New York state and “the leader in the transition of Rochester’s economy,” according to a new report from the Center for Governmental Research, a nonprofit public policy agency based in upstate New York.

Employment growth has placed the University—which has been the top employer in the region for several years—among the largest private employers in New York, behind only the Presbyterian Healthcare System in New York City and national corporate giants Walmart, Citigroup, IBM, and JP Morgan Chase.

“One of the central goals of this institution is to provide a foundation—through education, culture, science, and medicine—for future economic growth in Rochester and beyond,” says President Joel Seligman.

The University is responsible for approximately 8.8 percent of the local labor force, providing some 47,000 jobs and \$2.3 billion in wages in the region, the report notes.

Such economic impact puts Rochester in the company of other private research universities: the University of Southern California is the top private employer in the city of Los Angeles, as is the University of Pennsylvania in the city of Philadelphia and Johns Hopkins University in the state of Maryland.

“Over the past several decades, our state has evolved increasingly to a knowledge-based economy in which by 2009 five of the largest 10 employers in New York either are universities, health centers, or both,” Seligman said in his Garden Party speech in May.

“A key to the University’s growth has been our focus on innovation,” he noted. “During the past eight years, we have been ranked as one of the top 10 universities in the country in terms of patent royalties—an extraordinary tribute to the talents of our faculty.”

The center’s new report calculated the economic impact of the University using two methods. A more conservative formula, called the traded sector, assumed that

certain functions of the University—primarily those related to health care—would continue to be performed in the community even if the University did not exist. The second formula—called the local and traded sector combined—calculated the impact of all University activities.

“Education and health care have become key drivers of local and regional economic growth throughout the United States,” according to the report. “The increasing sophistication of medical science, rising affluence, and the aging of the population all contribute to the growing importance of the health sector.”

“We wanted to put the University’s role as a major employer in context, which is what led us to construct a list of the top private employers in the state,” says Scott Sitting, a project manager at the center and coauthor of the Rochester study.

“Health care and higher education is the largest sector represented on the list with nearly twice the employment as retail, which came in number two,” says Kent Gardner, the president of the center and a coauthor of the study.

According to a report commissioned by the Associated Medical Schools of New York, academic medical centers nationwide contributed more than \$500 billion to the U.S. economy in 2008—approximately 3.6 percent of the country’s total economy.

And New York state plays a critical role in that economic impact: Its academic medical institutions are responsible for almost 14 percent of the economic impact of all American academic medical centers, according to the association.

The new Rochester report also noted that the University has several major expansion projects under way, including the Clinical and Translational Science Building, a project to increase the number of beds at Strong Memorial Hospital, the renovation and expansion of the Eastman School, plans for a Warner School building, and the development of a college town on University-owned land on Mt. Hope Avenue.

For more about the study, visit the center’s Web site at www.cgr.org. **R**