WATER AND ENERGY

Amanda Brock, CEO of Water Standard, shares her thoughts on the water-energy nexus and its impact on the water industry.

Balancing the need for energy independence, water security

The U.S. water industry is at an inflection point. Open a newspaper or magazine these days and you realize that the U.S. finally appears to be serious about focusing on the issue of energy independence and reducing dependence on foreign oil. However, as this dialogue labors forward, a more critical debate has emerged: the need to balance energy independence and security with effective water management. While the traditional water/energy debate has focused on water and electricity as key elements of economic growth and national security, the current flashpoint is upstream; analyzing the environmental impact and use of water in hydraulic fracturing, which can help break U.S. dependence on foreign oil. Current projections estimate that by 2020, 20 percent of the U.S.'s total gas supply will come from the shales produced by hydraulic fracturing. The challenge is accessing this critical supply without compromising water resources and the environment.

The water/energy dynamics have now changed, the battle lines are drawn and rhetoric rages. But what we see is the energy companies and environmental players dominating an increasingly polarized debate. The water industry has been missing an opportunity to play a leadership role in highlighting the real issues and identifying solutions.

That may be changing. At the recent American Water Summit, the water industry recognized the need for creative solutions to balance the sometimes competing needs of the water and energy industries. The consensus was that water is one of the biggest obstacles standing between the U.S. and energy independence. The question was: can water treatment technology address the energy industry's water challenges without compromising the environment? Speakers from Heckmann Corp., Water Standard, Dow, MI Swaco/Schlumberger, FilterBoxx and Tudor Pickering unanimously concluded that water technology will play a pivotal role in achieving the goal of U.S. energy independence.

As a result of high energy prices and the need for effective wastewater treatment and reuse in the energy industry, there has been a tremendous surge in research and development. Technologies from traditional segments of the water industry are being adapted for use in energy production, logistics solutions are being implemented and new technology is being rapidly commercialized.

What does the public want?

In October, the University of Texas published the results of a poll that focused on the importance of energy. The rationalization for the poll sounded very familiar. It read, "Across all borders, cultures and economic systems, energy is the one essential to sustaining modern civilization. Wars are fought over it, lives and jobs depend on it." This statement could have easily been about water.

The University of Texas survey concluded that 84 percent of Americans are worried about U.S. consumption of oil from foreign sources. Compare this to the poll that was conducted by ITT in late 2010 that focused on the value of water. The results of the ITT survey showed an overwhelming 95 percent of Americans valued water over any other service they received (including electricity). What we can take away from these results is that we have to achieve a middle ground and constructively value and protect our water resources while developing domestic sources of energy.

Optimizing existing resources

But while the water industry enters this new energy market and joins the debate, perhaps it should reflect on its own performance. The U.S. loses an estimated 2 trillion gallons of clean water at an annual cost of $2.6 billion through broken and leaking pipes. If we were able to reduce our leaks by a meager 0.5 percent, we would save 270 million gallons of water a day. That's a lot of water, considering that only approximately 3.8 million gallons of water are needed for fracturing a well and 80,000 gallons for drilling a well.

It is also a question of establishing priorities and focusing on what is important. At the American Water Summit, Dave Pursell of Tudor Pickering pointed out that an average size golf course uses on average 2 million gallons of water a day. An equivalent sized gas shale production will use 24 million gallons of water over the life of that field.

The water industry must find its balance quickly, particularly when the University of Texas survey concluded that in a tough economy, the public was less concerned about energy's impact on the environment than on their wallets.

Need for leadership

The president of the University of Texas released a statement recognizing that the public craves leadership on energy issues. Agreed. But this country also desperately needs effective leadership on conjunctive water use. The demand for water and energy security must be met, and a balance of competing interests is achievable. We must develop cohesive leadership and a well defined position on effective water management in the energy industry. Without such leadership, the water industry cannot help shape an optimum resolution to the current debate.

Amanda Brock is the CEO of Water Standard. She has spent her career building and managing global infrastructure businesses.