Make Better Mistakes
By Mark A. Jamison, Ph.D.

It was clear from the nervous voices that the discussion had found a tension point. The small group of consultants, academics, energy companies, and a single utility regulator – all attending a large conference on the new energy economy – had been assigned by the conference organizer to discuss barriers to increased use of intermittent renewable energy, energy storage utilities, electric cars, and the like. I was in this group.

Our host country had been a pioneer in electricity reforms, having broken up and privatized its state-owned electricity monopoly in the 1980s. However, it appeared to our small group that the country’s vertically disaggregated electricity system wasn’t up to the challenge of a creating new energy economy. We had no answers: We didn’t know what the right structure should be, which companies could or should reform their cultures and business models, which laws should be repealed, which new laws should be adopted, etc. All we knew for sure is that no one in the group was safe: Each of our roles in the current energy system was at risk. As one might expect, we quickly discovered that talking about whether customers would recharge their cars at home or at work was less unsettling, so we moved on to that topic.

Ignoring a problem doesn’t solve it. The electricity sector, its customers, its suppliers, and its regulators are at a complex crossroad. We generally accept that increased use of renewable energy sources, more efficient use of power, improved grid management, and new uses for and new ways of pricing electricity are imminent. We could be wrong. Even if we aren’t wrong, we don’t know the best way to effect these changes, nor can we describe what the changes should look like.

How do we resolve this complexity and uncertainty? We don’t. As economics writer Tim Harford explains in his TED talk (www.ted.com) on the dangers of thinking we have the answer (which he refers to as the God complex), we have to start making better mistakes.

Most of us are not good at this because it means admitting our own incompetence. Economists and engineers like developing deterministic solutions and then moving on. Lawyers like writing laws and finding legal conclusions. Voters cast their ballots for politicians who make promises about the future and who vow to fight the bad guys, namely the other political party. Our desires to protect our professional reputations drive us to believe we have answers even when none exist.

Some traditional regulatory practices work against us when the future is uncertain and complex. Several jurisdictions have laws that require utilities to provide energy at least cost. What is least cost in a complex environment? Some costs, such as risk and foreclosed options, cannot be readily quantified. Sometimes a company incurs costs on behalf of others, perhaps decreasing
system costs, but making the company’s service more costly. The ultimate effects of utility investment decisions are unknowable for years, making fact-based judgment difficult at best.

Finding the future is a trial and error process, so costs of errors are necessary for finding the future. How can regulators assess whether the learning has been efficient? And how should the regulator value the spillover benefits of errors when other utilities, regulators, customers, and others learn? Our normal view of prudence, and the way regulatory and utility work is scrutinized in the media and in the political arena encourages people to prefer errors of omission rather than errors of commission, because the former are harder for others to see.

Sometimes regulatory laws restrict business models, for example, by precluding companies from vertically integrating. This was the situation in the country hosting the conference, where some companies were refusing to introduce new energy services because they were uncertain whether the new services should be classified as providing energy, distributing energy, marketing energy, or something else. That classification would determine who could provide the services.

What can we do? We should view our next step as a next step and nothing more. We should encourage energy companies, customers, and regulators to experiment without risk of reprisal for errors as long as experiments are openly discussed, openly analyzed, and openly discarded when they fail to be part of the next step.

Most of all, we should embrace the notion that no one has the answer. As Mr. Harford said, “I see the God complex around me all the time in my fellow economists. I see it in our business leaders. I see it in the politicians we vote for — people who, in the face of an incredibly complicated world, are nevertheless absolutely convinced that they understand the way that the world works.”