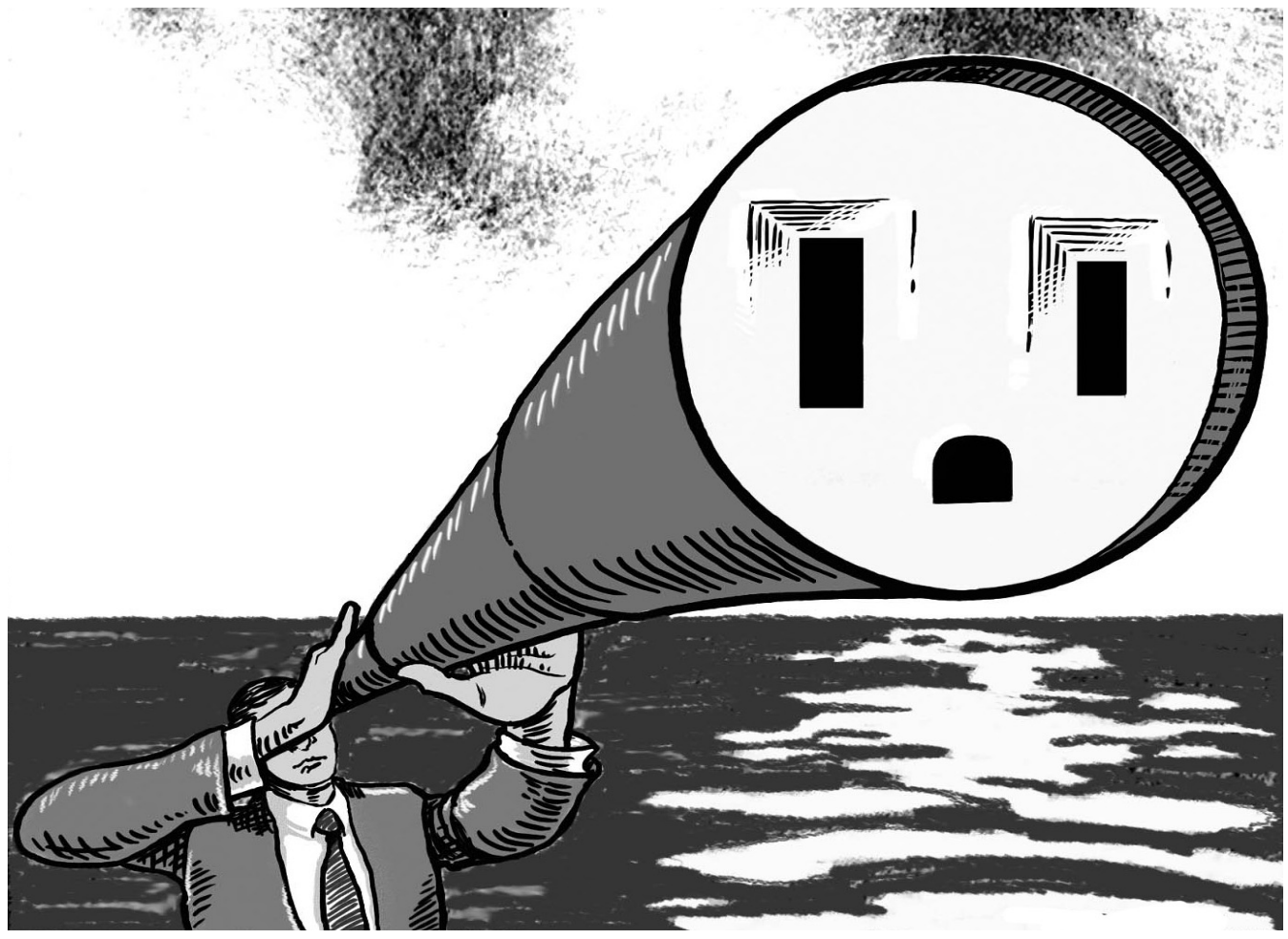
ENERGY'S NEXT STEP



By Curt Rich

Once heralded as the lynchpin to America's energy independence, ethanol is increasingly under attack as a flawed energy resource. The livestock and food industries criticize ethanol for the impact it has on the price of corn. Environmentalists point out that corn ethanol takes almost as much energy to make as it produces. Communities in more arid regions of the country worry about corn ethanol's high demand for water.

At the same time, Congress is debating energy legislation to substantially increase the amount of ethanol that we produce and consume in the United States. Before the year ends, Congress will vote on a bill that mandates sellers of transportation fuels to increase annual renewable fuel consumption by as much as 36 billion gallons by 2022. For a country that consumed 140 billion gallons of gasoline in 2006, that amounts to more than one-quarter of our annual gasoline use.

In the near term, policymakers are expecting corn ethanol production to continue to expand to meet this market mandate. Industry experts generally believe that the U.S. can continue to increase corn production to produce up to 14-15 billion gallons of ethanol annually. So, what fuel will supply the additional 20 billion gallons of non-corn biofuels needed within the next 15 years?

Cellulosic biofuels are made by releasing the sugars locked in the cell structure of plants — wood, grasses, dedicated energy crops, agricultural waste and even yard clippings — and fermenting that sugar into fuel. The Federal Government's 2005 "Billion Ton Study" concluded that the U.S. produces enough surplus biomass annually to produce 3.5 billion barrels of oil, or 60 percent of our country's yearly consumption. In addition, cellulosic biofuels produce four to six times more energy than they require to make, while reducing greenhouse gas emissions by 86 percent compared to petroleum. Corn ethanol, by contrast, produces one and a half times the energy it consumes, and reduces emissions by only 18-29 percent.

Cellulosic biofuels produce four to six times more energy than they require to make, while reducing greenhouse gas emissions by 86 percent compared to petroleum.

As a successor to corn ethanol, cellulosic biofuels show real promise, but this potential currently exists only at a demonstration scale. In order to rapidly move to the nationwide commercial deployment of cellulosic biofuels, Congress must embrace policies that singularly develop the cellulosic biofuel industry. Those policies include investing in continued research, helping to finance the first generation of cellulosic biorefiners, creating a national market for cellulosic biofuels, and providing initial price support to help this new industry gain its footing.

First, in the area of research and development, the Bush administration gets high marks for providing robust financial support for the cellulosic biofuel industry. In 2006, the Department of Energy announced more than $500 million in grant funding for first-generation biorefineries and associated cellulosic biofuel research. This industry will require that level of support and more over the next few years, as it works to move the technology from the laboratory to the marketplace.

Second, the biggest barrier to commercialization for a new industry is access to capital. In the case of the cellulosic biofuel industry, commercial lenders are simply unwilling to invest hundreds of millions of dollars in a project that uses pre-commercial technology. The Energy Policy Act of 2005 provides new authority to the Department of Energy to issue federal loan guarantees to support new cellulosic biorefineries. Just last month, the DOE announced its first round of loan guarantees, including an award to build a commercial facility that converts landfill waste into ethanol. Four projects is a good start, but the DOE needs to move quickly and provide federal financing to other meritorious proposals to really jump-start this industry.

Third, the cellulosic biofuel industry needs a domestic market. In 2005, Congress passed the federal renewable fuel standard requiring the increased use of renewable fuels. This federal mandate helped galvanize the dramatic growth in U.S. production and consumption of corn ethanol.

Last year, U.S. corn ethanol consumption jumped 33 percent to 5.4 billion gallons. By 2009, if all the plants that are planned or under construction are built, corn ethanol production capacity will reach 11.6 billion gallons a year. A federal renewable fuel standard for cellulosic biofuels that begins in 2010 — when the first commercial cellulosic biorefineries come on line — can spur the same sort of growth for our next generation of biofuels.

Finally, the cellulosic biofuel industry needs a targeted federal tax credit. Tax subsidies are frequently criticized, but the simple fact is they are effective in driving industry innovation and creating markets. Tax credits are largely responsible for building the wind industry and spurring sales of hybrid automobiles. The corn ethanol industry has enjoyed a tax subsidy since 1978 and currently receives a tax credit of 51 cents per gallon.

The cellulosic biofuel industry will need a tax credit commensurate with its initial high cost of production. Legislation is pending that gives the industry a $1.28 per gallon credit. Unlike other industries, however, the cellulosic biofuel industry advocates limiting the credit for the first 2 billion gallons of cellulosic ethanol produced. This limitation avoids giving producers a permanent subsidy, but rather ignites a race by entrepreneurs to be the first to market.

There is emerging consensus that cellulosic biofuels may offer the most rapid, productive and cost-effective pathway to increase our domestic output on transportation fuels. Congress and the administration must act aggressively to jump-start this industry. The policy road map discussed here is a good place to start.

Curt Rich is a partner in the Washington, D.C., law and policy firm of Van Ness Feldman. He represents companies committed to developing a renewable fuels industry in the United States. He can be reached at jcr@vnf.com.

Courtroom Analogies Are to Lawyers as Weapons Are to Soldiers

By G. Christopher Ritter

Imagine this scenario: You're defending a major chemical company against charges that smoke from one of its incinerators poisoned residents in several adjacent communities. One of your challenges is to explain the concept of a "no-effect level," as well as describe how regulators use that level to calculate safety standards for individual chemicals. It's a complex topic that draws on arithmetic, chemistry, biology, toxicology and intricate descriptions of modern manufacturing processes.

Asleep yet? Just imagine the effect on your jurors.

The fact is, we attorneys expect a lot of our jurors. We expect them to give up their day-to-day lives to resolve problems they've never considered, for people they've never met. We expect them to learn and master complex topics in just a few short days, when the attorneys and their expert witnesses have had months — if not years — to learn about the subject. We expect them to stay awake through what can be hours of mind-numbing technical detail.

And in return for all this work, we expect — or at least hope — that they'll decide for our side.

But I'll let you in on a secret. The key to winning over jurors isn't burying them in scientific detail, technical jargon and detailed descriptions of mechanical processes. The key is to teach them just enough about the topic to be able to make your point. And one of the best ways to teach jurors is by using analogies.

Analogies work because jurors (like all humans) start learning unfamiliar facts by connecting them to facts, concepts or emotions they already know. As Edward Tufte, the great guru of information architecture once said, the single most important question that you must help your audience answer is "Compared to what?" Once your learner knows what the new stuff is like, he can move on through the unfamiliar information with greater comfort and comprehension.

It's as if the juror is standing at the base of a steep cliff and you're showing him the first foothold. That was an analogy, by the way.

An analogy is really any kind of rhetorical tool that increases understanding by tying two apparently disparate concepts together. Such tools include:

Metaphors: A figure of speech in which a word or phrase denoting one object or idea is used in place of another, so as to suggest a likeness between them. That is, you might say, "Glaucoma is a thief of sight" versus "Glaucoma can lead to blindness" or "The company was hemorrhaging money," rather than "The company's expenditures far exceeded its revenues."

Similes: A figure of speech comparing two unlike things, by using the terms "like" or "as." In a simile, you would say, "Glaucoma is like a thief" or "It was as if the company was hemorrhaging money."

Real analogies: You can also compare two different objects specifically to illuminate the qualities of one of the objects. Compare a DNA strand to a zipper, for instance, or the way computer memory works to a parking lot with lettered rows and numbered stalls. The sky's the limit with such comparisons.

Analogies are like secret routes through dense downtown areas. Sure, you can take the crowded main roads, stopping at every intersection. Or you can cut through a couple of alleys, zip along a side street that has no traffic lights and arrive at your destination 15 minutes faster — and blissfully unaware of all the traffic jams you missed along the other route.

Analogies, in other words, are short cuts to a juror's understanding. (And yes, that was another analogy.)

In trial, analogies often serve three purposes.

First, they are used to introduce key terms or concepts. For instance, we once helped a lawyer who had a case in which he had to explain what happens to the validity of a contract if certain terms are missing or haven't been fully agreed to by both parties. More specifically, he had to explain that the missing information only invalidates the contract if the information was "significant," which means that its inclusion or exclusion would alter the terms of the contract.

For many jurors, listening to a lengthy discussion about these terms would be boring at best and confusing at worst. So we helped this attorney come up with a trial graphic that compared a contract to a jigsaw puzzle. Some pieces, we explained, could be left out without compromising the picture, but if you left others out, the picture would lose its intended meaning.

Second, analogies are used to explain the relevance of key numbers, especially numbers that the average human brain can't grasp. For instance, in toxic tort cases, plaintiffs will often argue that no concentration of a certain chemical is safe. And defendants will often try to explain the notion of a "no-effect level," that is, the level at which a chemical's concentration will cause no harm to a human — which may be expressed in parts per million or even billion. That's hard to imagine.

One way to illustrate it, however, is to compare concentrations of chemicals to falling off a building. That is, just because a fall from a 20-foot-high platform would be dangerous doesn't mean that a fall from a one-inch high platform would also be dangerous.

Finally, analogies can be used to thematically counter a defendant's affirmative defense. For instance, let's assume that an affirmative defense consists of a series of elements, all of which must be satisfied in order for the defense to be effective. For an analogy, you could show the difference between a brick wall (which will remain standing even if you remove a stone or two or three) and a Roman arch (which will collapse if one piece is missing). And then you could point out that the same is true of your adversary's defense — if even one piece is missing, the whole thing collapses.

Rhetoricians sometimes say analogies are a weak form of argument because, even if two items are alike, differences inevitably arise and the analogy breaks down. This is true.

But rhetoricians are looking at the wrong end of the analogy. Analogies are most effective when used as introductions. In other words, they are strongest at the beginning of the story or when you first introduce a concept. Analogies used this way help provide an orienting view to the juror. They help the juror begin to answer the question "Compared to what?"

As such, beware that you can't just stop with an analogy. If the analogy is going to be effective, you ultimately need to find ways to supplement the analogy with real and sufficient facts.

Once you explain what a "significant" term is in a contract, for instance, you can talk about the ways in which your client's contract did not contain the significant "missing pieces," thus rendering it invalid. Once you describe how the effect of gravity — which is dangerous at 20 feet — isn't at all dangerous at one inch, you can start to explain how chemicals likewise may be dangerous at high concentrations but harmless at low concentrations. And once you explain how Roman arches tumble if you take out one stone, you can show how your adversary's argument likewise tumbles when you take out just one element.

This way, when your jurors go out to deliberate, you can be sure the structure of your argument was built on a solid foundation of understanding. And yes, that was an analogy, too.

G. Christopher Ritter is a lawyer and a member of The Focal Point, a litigation graphics and strategy firm in Oakland. He is the author of "Creating Winning Trial Strategies and Graphics." He can be contacted at gcr@thefocalpoint.com.