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## The nuclear energy industry's communication problem

BY BARUCH FISCHHOFF | 17 FEBRUARY 2009

According to the industry, nuclear energy is on the verge of an enormous resurgence, fulfilling the promise that was thwarted by the Chernobyl and Three Mile Island reactor accidents, the Washington Public Power Supply System financial collapse, and other misadventures. These upbeat accounts point to new technology, legislation, energy realities, and management teams as reasons for optimism. Skeptics portray these opportunities as mirages, obscuring the unresolved problems that undermined nuclear expansion plans a generation ago. They point to insurance, financing, proliferation, siting, accident and attack vulnerability, staffing, nuclear waste, and other uncertainties as reasons for pessimism.

When offered by partisans, neither account is entirely trustworthy, nor entirely believed by those issuing it. Rather such accounts represent the posturing of advocates who hope to spin self-fulfilling prophecies and create an aura of inevitable success--or failure.

Working the crowd is essential for a technology such as nuclear energy, which depends on the public's acceptance to host plants, invest in industry firms, and support government subsidies and loan guarantees. Proponents want the world to believe that the public will increasingly be open to an energy source that directly produces no greenhouse gases, while opponents want the world to believe that the public will increasingly fear accidents, cost overruns, the uncertain future of nuclear waste, and the diversion of weapon-grade material to bomb making.

In truth, neither side really knows what the public fears or wants. Unless supported by sound empirical evidence, claims about public opinion are just speculation. In the case of nuclear energy, there's surprisingly little research describing the public's concerns about nuclear energy in any real depth. Moreover, predicting future public concerns requires predicting how nuclear energy will emerge as an issue through legislation, protests, hearings, accidents, terrorist diversions, oil embargos, climate change-linked disasters, or other currently unknowable events.

One can, however, predict how the industry will be judged by the public when it responds to events (or creates them). If the industry is seen as responsible and genuinely concerned with the public's welfare, as well as its own, then it will be judged fairly. The following principles, drawn from research and experience, specify what it takes to be seen as such a partner. Adhering to them doesn't guarantee public acceptance or an end to vigorous public debate over nuclear energy. But it does increase the chances of having fewer, but better conflicts, ones that focus on legitimate differences in the interests of the industry and the public, made up of diverse

constituencies with their own distinct interests and views (e.g., plant neighbors, environmental justice communities, and elected officials).

Following these principles won't be easy for an industry that has often viewed communication as a one-way process. It will need to move beyond a "decide-announce-defend" communication strategy to an approach that begins by listening to the public and moving in a more acceptable direction. In fact, the industry's relationship with the public must be paramount. That means worrying at the highest levels of management about whether the industry actually has a story worth telling, in the sense of bringing genuine benefits and acceptable risks to society. The principles listed below are, in effect, corollaries of adopting the strategy of achieving this aim:

**Senior management must be committed to treating communication as a strategic activity, not an afterthought.** Organizations are busy places, consumed with meetings, paperwork, and intrigue. They don't naturally invest in listening to outsiders unless their senior management treats communications with the public as a strategic matter, essential to its success. People are poor judges of what others think about them, especially when they have different life experiences--as when members of a technically sophisticated industry, such as nuclear energy, imagine the beliefs and motives of a nontechnical public and vice versa. Organizations that forgo direct two-way communication with the public (especially when they disagree) are choosing to fly blind, relying on intuition, rather than evidence, regarding the conditions necessary for public acceptance.

**Management must consider communication in all activities.** A firm's public face can be shaped by any of its actions. For the nuclear industry, those actions include how it maintains plants, disposes of waste, conducts siting processes, lobbies for permits, participates in electoral politics, deals with neighbors in routine times and emergencies, and treats workers. Communication must be a strategic part of each activity: Have we listened to the public's concerns? What is our duty to inform? What is our story? Is it one that can be told with pride? If not, can we change our operations so that there's a better story to tell? Without such awareness, firms can unwittingly send messages that undermine their cause. For example, a labor dispute might raise doubts in the surrounding community about worker morale and plant safety. Issue advertising might make people wonder what an industry is hiding and why it's trying so hard to sell itself.

**Management must assume stewardship over the life cycle of its technology.** A firm's reputation depends not only on its own actions, but also on the actions of the organizations that provide it with ancillary services, such as independent audits, regulatory oversight, materials transport, waste handling, and personnel screening. Even when these partners are beyond a firm's direct control, their actions communicate on its behalf. If they can't be completely trusted, then the firm must either supplement their management or ensure that they are subject to effective regulatory oversight.

**Management must press for industry-wide discipline.** Industry associations are designed to address diffused responsibilities such as those requiring stewardship (e.g., materials transport, nuclear waste disposal, and storage). They can, however, face pressure to act in ways that undermine their effectiveness. One such pressure is keeping their members happy--including members whose behavior undermines the industry's overall credibility. A second such pressure is the temptation to exaggerate the external threats posed by "irrational" citizens or

"evil" anti-nuclear opponents. An industry association that sounds these scary tropes can hardly treat the public as a respected partner or be seen as such.

**Management must separate public affairs communications from public health communications.** Any firm needs a public affairs office to advocate on its behalf. Any firm that creates health risks also needs a public health communications office to tell the public what it needs to know in order to understand the risks that it faces. Public affairs communicators worry about defending the firm; public health communicators worry about defending those affected by its actions. Successful public health communicators also defend the firm by demonstrating its competence and honesty.

**Management must staff its public health communications adequately.** Effective public health communications require four distinct kinds of expertise:

- subject-matter specialists such as nuclear engineers, radiation physiologists, and evacuation coordinators who can provide the best available facts;
- risk and decision analysts who can identify the most critical facts and characterize their uncertainties;
- behavioral scientists who can design and evaluate communications; and
- system specialists who can make the communication process work.

It's not hard to imagine what can go wrong when people are asked to go beyond the limits of their expertise. Few behavioral scientists know anything about radiation physics. Few nuclear engineers know how to explain technical concepts to lay audiences. Few risk analysts know how laypeople think about uncertainty. But together, these specialists have the skills needed for effective public health communication.

**Management must learn from experience.** Effective managers ensure that they receive clear signals regarding their firm's successes and failures. Evaluating the quality of a firm's communications requires assessing how well it has understood the public that it affects and how well the public has understood it. Those assessments require applied social science, conducted with the methodological rigor of peer-reviewed research. Firms cannot learn if they contract with researchers who lack the needed technical expertise and produce research that could not survive academic peer review, or if they create incentives for biased results--e.g., by having the same people create and evaluate their communications or by rewarding those who make management feel good, regardless of what the public thinks.

**Management must value its intangible assets.** Effective communications require adequate resources. These resources are minor relative to the overall expenses of a capital-intensive industry such as nuclear energy. They're even minor relative to the cost of vanity advertisements, a common form of corporate communication. The return on this investment, however, may be undervalued because it's intangible--protecting and enhancing a firm's trustworthiness. Management needs to remember that the intangible asset of trust bears tangible returns in the form of reduced uncertainty about public acceptance and regulatory approval, as well as reduced executive time putting out avoidable fires.

Good communication cannot guarantee success. It can, however, reduce the risk of needless conflicts that arise when otherwise acceptable stories are not understood by the public, when solvable problems are not addressed, or when people feel like they are not being treated

respectfully. Good communications might even suggest ways to accommodate public concerns--e.g., managing plant sites for wildlife, instituting confidence-building safety measures, creating employment opportunities, or shifting transportation routes. On the other hand, communication research also can reveal insoluble problems--at least for some plant designs, at some sites, under some regulatory regimes, in some financial climates. That, too, is worth knowing. If the industry does not have a story that will bring the public to its side, then it will either need to change itself so that its story is acceptable or rely on strong-arm tactics, exercising political clout, to achieve its ends--a strategy that presents its own set of issues and problems.

Strategic communications, following these principles, provide the best chance to win the battle for hearts and minds and the clearest signal for whether that battle will succeed. Those betting on the industry's future can see how serious it is about its partnership with the public--by whether it invests in top-down, one-way communication or open, two-way dialogue--and place their money accordingly.

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