

Technical Professionals Can Benefit from Serving on Non-Technical Stakeholder Groups

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ABSTRACT

Government agencies have come to appreciate the value of stakeholder input, particularly for decisions regarding environmental cleanup and waste disposal. Successful public participation will also be important in getting public acceptance of new nuclear power plants. However, for a variety of reasons, public participation sometimes misses the mark. Primary among these reasons is that the technical experts can be their own worst enemy when it comes to public participation: to non-technical people they can appear intolerant of a lack of knowledge or comprehension. One sure way for a technical person to be sensitized to this is to serve as a member of the public on an advisory board. Once a technical person has participated as a public stakeholder, s/he will have a new appreciation for the difficulty technical and non-technical people have really understanding each other. And s/he will more fully appreciate the difficult task the stakeholders have taken on, trying to make sense of complex information presented in unfamiliar ways. A primary benefit of serving on these boards for a technical person is that they provide a unique perspective and valuable insights that the technical person can use to enhance their professional technical interactions with the public and additionally, to improve the interactions of the board members.

INTRODUCTION

Communication at its best is imperfect. Communication is more difficult when it occurs between groups who do not speak the same language. The U.S. Department of Energy (DOE), the U.S. Environmental Protection Agency (EPA), the U.S. Nuclear Regulatory Commission (NRC) and state regulatory agencies do not always speak the same language as the general public when discussing technical issues. When people fail to recognize differences in how and why they are communicating, it is inevitable that misunderstandings will result. The fact that everyone is speaking English does not guarantee that everyone understands what is being conveyed and so, without anyone realizing it, things are mis-communicated, misconstrued, and misunderstood. The result is frustration and irritation on one side and frustration and sometimes distrust on the other.

On the other hand, when communication is successful – when both technical and non-technical interested parties clearly convey their issues and concerns, and when both sides really “get” what the other side is trying to tell them, the decision process is much more

successful, and the outcome is often better for having input from both technical experts in scientific/engineering disciplines and people with expertise in other, non-technical disciplines.

This paper provides examples of three genre of issues that often arise during the public participation component of decisions involving environmental management and nuclear waste disposal. The first is generic and can be applied to almost all situations where technical and non-technical people are trying to communicate with understanding. The second relates more to the components of effective groups. The third touches on challenges that are the direct result of dealing with nuclear issues.

These examples are not exhaustive and may not be representative of many interactions between technical and non-technical stakeholders, but they have come up time and again during my experiences with public participation, both as a stakeholder and as a contractor supporting the technical teams. They serve to illustrate how things from the very simple to the very complex can affect the outcome of public participation. I would never have recognized some of these situations as negatively affecting public participation if I had not experienced them as a stakeholder. My purpose is threefold: alert the reader to looking at public interactions from all perspectives, to help the reader realize that most way to improve communication with the public are not hard, but take time and thought, and suggest that technical readers interacting with non-technical peers can take the lead in improving communications.

GENERIC EXAMPLES

Topical Knowledge -- Everyone understands that the technical expert's knowledge of a project is greater than that of any non-technical stakeholder for the simple reason that the technical expert works on the project daily. In contrast, stakeholders get brief, intermittent exposure to the project. No one expects the stakeholders to understand all the nuances. What many technical experts do seem to expect is that stakeholders, coming into a discussion on a subject they last heard about six months ago, will immediately pick up where they left off, AND intuitively know all that has transpired in the intervening months. This is an unrealistic expectation and makes stakeholders suspicious of the agency's intent – "Are they deliberately trying to confuse us?" When someone is living and breathing a project it is hard to remember that the knowledge base of people not exposed to the project every day fades over time. But, it does. This attenuation of knowledge is true even if the stakeholder is well-versed in the topic – up to and including former employees who worked the project or similar ones.

A better practice would be to provide fact sheets or brief, periodic and regular updates, or, at the least, to spend several minutes at the beginning of any presentation re-introducing the topic, the issues, the status as it stood at the last update and summarizing events since the last update. This gives people a chance to dredge their memory banks and refresh their knowledge.

Harder to resolve is the disparity in depth of knowledge between project staff who don't realize how much information they assume is common knowledge by laypersons, and the lay stakeholders who recognize they are lost in a maze of information, but can't even figure out how to frame questions to get an answer that gives them a point of reference. Again the cause is familiarity/unfamiliarity with the project and the subject matter – technical experts speak in jargon that is not always clear to people unfamiliar with the subject. The more familiar a person is with a subject, the less likely it is that s/he will fully recognize this difference in depth of understanding. Another subtle cause of misunderstanding is that people, me included, often speak imprecisely. Subject matter experts recognize the slip of a speaker and accommodate for it by translating what was actually spoken into what the speaker meant. Stakeholders can not do this – to them what was spoken is what was meant, leading to confusion and an imprecise understanding of what the speaker intended, and probably thinks s/he made quite clear.

As technical experts presenting information to an audience, remember that your audience knows very little about your particular discipline or project, but is composed of intelligent individuals with expertise in topics of which you have little knowledge. Provide them information in the same way that you would like them to explain their discipline to you. Pay particular attention to precisely conveying your discussion points. Strive to clearly explain technical concepts without using industry jargon.

Acronym Lists -- This is an example of a seemingly minor inconvenience that can have large impacts. Agencies talking to stakeholders are always careful to provide complete acronym lists in presentations. Speakers assume that because they have provided the acronym list, they are free to use acronyms in presentations to stakeholders as readily as they use them in presentations to colleagues. A list of acronyms at the beginning of a presentation does not serve the intended purpose if the intended purpose is to allow the speaker to use those acronyms indiscriminately. It is hard enough to follow the gist of a complex technical presentation without having your brain automatically disengage from the presentation every time it hears an unfamiliar acronym in order to mentally search for the meaning of the acronym. It's like stubbing your toe on the sidewalk; it trips you up for a minute and destroys your rhythm. I would suggest that speakers minimize acronyms unless they are talking to people very familiar with the topic. Or, if you must use an acronym identify it up front as one that you will be using and, in the first references to the acronym, also use the full name.

Public Meeting Formats -- Public meetings are the most significant interface between the public and the agency, and the place most likely for miscommunications. Often the expectations of both sides are not met – agency staff feels beaten up and stakeholders feel ignored. There are many reasons for this, and I am only going to talk about a couple of representative examples. Everything that happens in public meetings is a chance to make or break the connections with the public. In general, agencies should spend a great deal of time on all aspects of public meetings, and on anticipating things that could happen.

The public often does not understand the purpose of the meetings, or understands the agency's purpose, but chooses to ignore it. The agency is interested in comments on a specific topic and makes that clear in the advertising for the meeting. The public considers a public meeting that rare opportunity for them to "have their say" about whatever is bothering them, regardless of whether it is on topic. Agencies have recognized this problem and address it better than in the past, but it bears remembering when you are planning a meeting – expect to get comments that are not on topic, and provide the commenter with appreciative feedback, and information about how his concern will be addressed. Explain early and often the purpose of the meeting, and provide a mechanism to make comments not related to that purpose (e.g., provide comment cards and commit to getting people responses). People may not get to say what they came to say, but they will feel like they were recognized.

Not everyone is comfortable in all roles. An excellent project manager may not be good at interacting with the public, often for no other reason than his physical appearance or demeanor. If the project manager is 6'6", weighs 240 pounds and typically stands with his arms crossed over his chest, he may appear intimidating. Without some coaching, he is not the person to greet members of the public and talk one-on-one, even if the public meeting procedure identifies that as the project manager's role. People will not want to engage him because he looks unfriendly. First impressions are lasting and it will be hard for him to overcome the public's first impression of him. If the project manager is an introvert, do not make her stand in front of a poster and engage sometimes hostile strangers in conversation. First and foremost, the goal of the meeting planners should be to make everyone as comfortable as possible, if the purpose is honest communication. Do not force people into roles they are not comfortable with or not suited for, even if only because of their appearance – it is counterproductive. Agencies should be open to ignoring their hierarchical organization chart in order to best meet the expectations and needs of the agency and the stakeholders. Extroverts should be working the open house; people with stage presence should make the presentations or at least introduce the speakers; those persons truly uncomfortable with public speaking can be recognized and their project role highlighted.

A sure way to send the wrong message to an audience is for a speaker to read her presentation. Speakers should not be so afraid of going off message that they can not relax and just talk to people about something they know really well. A speaker reading a presentation does not project an image of understanding her subject matter or enjoying her role. "Dry run" the presentations until the presenters come across as informed but informal. It gives the public confidence that they are speaking from knowledge, that they are engaged in the public participation process, and it eases the public's anxieties about public speaking fears as well. Relaxation is contagious.

COMPONENTS OF EFFECTIVE GROUPS

People tend to be biased towards their own decision-making style. Either they make the mistake of assuming everyone makes decisions like they do, or they assume their decision style results in superior decisions, or both!

Everyone falls someplace along a decision-making continuum between relying solely on the analysis of facts and relying solely on intuition, and in general, technical people are empiricists who are more comfortable analyzing facts than relying on their instincts. Another continuum moves from trusting experts to trusting family, friends, and neighbors. Those of us, like me, who populate our decisions with facts and expert opinions have a hard time imagining (since we have little imagination) that many people (probably the majority of people) are most comfortable with decisions based on a feeling in their “gut” and what family, friends and neighbors think. But it is true, and successful public participation recognizes, respects, and capitalizes on the many ways people make good decisions. Research supports the idea that group decisions tend to be the best decisions – and that the larger the group making the decision, the better the decision turns out to be. I suspect that part of the reason for this is that many different decision-making models are brought to bear on the problem, increasing the possibility of a more creative solution. Often it is the non-technical members of a committee who provide that really fresh look that ends up as an epiphany for the technical experts.

Dr. J. Todd Thornburg, administrative director of the Comprehensive Cancer Center of Wake Forest University has spent eight years identifying key aspects of productive scientific collaborations. He has identified a “common skill set” that creates a shared sense of purpose in successful partnerships. The skill set included the obvious of trust, respect, good communication skills, ability and willingness to cooperate, openness to constructive criticisms of one’s own ideas and agendas, and genuine interest in the input and opinions of others. He also looked at the mix of thought styles in these successful groups. The most successful groups of collaborative scientists include problem-oriented scientists, technique-oriented scientists, abstract thinkers (creative, not detailed), concrete thinkers (detail-oriented; linear), and synthetic thinkers who are able to coalesce diverse ideas.¹ Dr. Thornburg was specifically interested in the enhanced effectiveness of interdisciplinary teams over single researchers or groups of researchers within the same discipline in addressing complex scientific questions, but his assessment of the components of a successful team is equally relevant to the success of advisory boards. Problem-oriented scientists and concrete-thinkers can benefit from input by abstract thinkers.

Often fact-based people present very cogent, strong arguments based on sound facts, and are completely flummoxed when they are rebuffed by their audience. Undeterred, these worshipers of facts present additional facts, or present the facts differently or, sometimes, when nothing else seems to be working, just present the facts more loudly! Remember that the definition of insanity is doing the same thing over and over and expecting a different outcome. Continuing to throw facts at people who don’t use them as the primary basis for their decisions will not convince anyone of anything, but it will make everyone cranky and resistant to working together. If technical experts -- who have done the research, analyzed the data, and are proposing a technical decision based on that analysis -- want people to consider the decision, they need to recognize that no amount of factual information will persuade some people, and most people will not only weigh the

¹ Fyten, D. 2006. Better than One. Wake Forest Magazine, pp. 22 – 27. December.

facts, but also weigh the opinions of others. This is where the effort up front to get to know your audience individually will pay off. People who do not trust facts, will trust facts that are presented to them by a person they trust, and people trust friends.

Successful stakeholder groups take a long time and lots of work to coalesce. People have to learn to communicate with each other; they have to know each other well enough to trust each other, and have to respect what each person brings to the process. Only after a bond of trust and mutual respect is established can agencies get good, useful public participation. This takes longer when the composition of the group is diverse in knowledge and skills, but ultimately the diversity is the most important component in getting useful stakeholder input.

OVERCOMING NUCLEAR FEARS

Stakeholder opinions regarding the use, storage, treatment and disposal of nuclear materials, including nuclear wastes, tend to be fraught with the baggage of our Cold War childhoods – Nagasaki, Hiroshima and “duck-and-cover” drills at school. Therefore, when involving public stakeholders in decisions about nuclear materials, often the largest obstacle to people’s acceptance is their unfounded but very real fear of *anything* “nuclear”. Distinctions between different things “nuclear,” such as nuclear arms and nuclear power or nuclear medicine are lost; “nuclear” to them connotes “bombs,” “radiation,, “danger” and “death.” People in the nuclear industry should not assume that a person expressing fear is a person opposed to nuclear power and other non-weapon nuclear activities. Most people (those without an anti-nuclear agenda) are eager to learn about nuclear activities. When people they trust – friends, neighbors, colleagues on advisory boards – take the time to respectfully answer their questions in language they can understand almost all of them become comfortable with the idea of “safe” nuclear activities: medical application, radiography, energy production for space exploration, electricity production for reduced dependence on fossil-fired generation and fewer air emission. They may not understand the science, but they do understand that people who they respect understand the science and those people are comfortable supporting nuclear activities. In a similar way, lay persons are capable of understanding and distinguishing between absolute safety (i.e. no risk) and reasonable assurance of safety (i.e. improbable or remote risk) relative to the personal or societal benefits of an activity. In both cases, education, which admittedly takes time, provides knowledge and knowledge trumps fear.

CONCLUSIONS

The paper has two points that I hope you will carry away. The first point applies to everyone, regardless of their role in public participation. Bad communication happens more often than good communication – good communication requires thought, planning, and a time commitment. The time necessary to actually get to know the people serving on advisory boards can be long, but it is always worthwhile.

The second point is directed to technical people wondering if there is any value to serving on non-technical boards. My response is that technical professionals bring a lot to a

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board of non-technical stakeholders, and that they also get much of value from the experience that can be applied to their careers. At the same time, technical professionals should be sensitive to the reality that their methods, processes and language may not be readily understood or appreciated without patient and persistent encouragement.