



**Another Environmentalist  
for Nuclear Energy**

# Public understanding and nuclear energy

*Will the 1990s see a bridge or another barrier?*

Many years ago, Albert Einstein surmised that the fate of nuclear power would be decided in marketsquares. He must have known that this is where debates are most spirited, animated, and emotional, and where facts can get overshadowed.

For most of their lifetimes, nuclear energy proponents and opponents alike have been working the marketsquares, seeking the support and understanding of the public. Some have tugged at people's emotions, others have appealed to their common sense, and many have told them what to believe. And after 40 years of trying to win people over to their points of view, the 1990s find at best a standoff in many countries, for reasons often unrelated to this nuclear controversy.

It may be time to stop and more closely look at the difficult choices ahead, before the energy and environmental problems of the 1990s become even more serious by the turn of the century. Most countries need much more electrical power than they now have to sustain any kind of economic development, and they have to find the ways and the means to get it. Many countries, and in some cases entire regions, face the reality of polluted air and rivers moving from one city to the next, and they must find the tools and resources to clean them.

Yet only in a comparatively few fortunate countries are energy conservation or environmental measures — or nuclear electricity plants for that matter — a live option as the world approaches the next

millennium. The last World Energy Congress in Montreal made that point clear. It can only be amplified in Helsinki next year, when energy and electricity experts meet again in a climate of global warming.

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### Fears and images

In many respects, the nuclear debate is stealing precious time, and stalling important decisions. It cannot really be won or lost for good, if you examine its circuitous and oscillating public opinion record. In the 1950s and early 1960s, a sign proclaiming "another environmentalist for nuclear energy" would not have evoked a second look. Today it does. How can an environmentalist like nuclear energy? How can a nuclear supporter be an environmentalist? The debate has encouraged a "for or against" mentality that stifles, not fosters, understanding and constructive criticism. A net result has been lost credibility for both sides.

In his fascinating book, *Nuclear Fear*, author Spencer Weart documents just how divisive and counterproductive the public debate has been.\* All the social and political causes at play in debating the atom, and all the images, symbols, and hyperbole, he writes, have powerfully shaped people's attitudes and behaviour. Journalists, novelists, environmentalists, politicians, and scientists each have contributed to a string of imagery over the past 50 years that chiefly draws upon

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\* *Nuclear Fear*, by Spencer Weart, Harvard University Press, Cambridge, MA, USA (1988).

religious themes, social dreams, and personal fears.

The book helps illuminate why facts have such a hard time being heard, much less accepted, in the nuclear debate, and why both sides stand at an impasse today. Modern communication systems may make the images, and pro and con messages, all travel a bit faster to reach new neighbourhoods of the global village, in new forms and languages. Yet they do not enlighten often enough, and the debate begins anew bolstered by local interpretations, embellished fallacies, and wrong associations.

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### Facts and issues

Occurring within this setting, global nuclear events can only exacerbate the confusion. That a nuclear electricity plant technically cannot explode like an atomic bomb remains a scientific fact, yet after the explosion at Chernobyl in 1986, it unfortunately has become a far less publicly understandable one. The fact that the accident happened and received worldwide attention is not the only reason why. Some groups have worked to keep the confusion alive through speculation, sensationalism, and rumours that feed upon the preconceptions and fears people harbour.

There are signs that the debate is beginning to move away from the polarity, if not the imagery, of the past. Some environmentalists are acknowledging conditional support

for nuclear electricity plants and some nuclear proponents are strongly advocating better plants for safety and environmental reasons. They are moving outside of the confining nuclear debate and into a more open and productive dialogue, one more responsive to deeper public concerns about personal, environmental, and technological safety.

These concerns go far beyond nuclear power. "The issue of nuclear safety and public acceptance is but an example of the generic problem of complex, potentially dangerous technologies," Dr Paul E. Gray, President of the Massachusetts Institute of Technology, recently remarked. "There are many other such systems in use in the present-day world. Indeed, as the earth becomes more densely populated, with increasing expectations regarding standards of living, we find more and more examples of technology representing both a vital contribution and a potential hazard."\*

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### A bridge or a barrier?

For the world's nuclear industries, the early 1990s could be the bridge that takes them from one generation of technology and public communication into the next. "More and more, thoughtful persons recognize the environmental merits of nuclear power," Dr Gray said, noting that it will take work to keep them convinced. "The public

looks for signs, symbols, and examples to help reach its conclusions. Public information programs, coupled with more responsible media coverage, can surely help. However, in my view, the single most important condition needed to gain and retain public acceptance for any evolution of nuclear technology is for the international nuclear industry to maintain an essentially perfect safety record. If we can avoid further accidents the public may, in the face of fossil-fuel threats to the environment, and in the light of further evolution of this technology, be willing to trust the industry and nuclear power. Demonstration of competence is a very powerful means of winning friends and influencing attitudes."

This demand for virtual perfection — not to be confused with absolute safety, an unattainable goal for any industry — is one reason behind the growing co-operation and investment worldwide in keeping today's nuclear plants safe and in designing even better systems for tomorrow. Significantly, some plants that are not measuring up to safety standards are being upgraded or phased out and, in a number of countries, nuclear plans have been placed on hold. Just as significantly, new nuclear plants are coming on line — since the Chernobyl accident in 1986, just over 70 new plants have been connected to electricity grids in 15 countries — and more plants are being built to help produce the clean electricity people are going to need.

The demand for virtual perfection should not be lost on communicators and journalists in the nuclear debate. The fact of the matter is that, despite the best precautions and equipment, accidents can happen at nuclear power plants, as at

other industrial sites. Any nuclear accident undoubtedly will be a highly publicized one. How well this publicity communicates actual — and not imagined — consequences to people will serve as an instructive sign of how far the debate has come. We will vividly see whether a new bridge or another barrier is being built to the public's understanding of nuclear energy.

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### In this edition

In this edition of the *IAEA Bulletin*, a number of articles speak to problems facing scientists, journalists, and others in communicating with the public about nuclear energy and science in general. In many countries, nuclear utility companies are placing greater emphasis on "demystifying" the technologies by allowing people to teach themselves at energy and nuclear information centres. Other initiatives are opening a better dialogue with journalists and improving their accessibility to scientists, physicians, ecologists, technical specialists, and other factual sources of information.

At the international level, specialists are working more closely together through the IAEA and other channels to improve the reliability, safety, and performance of operations throughout the nuclear fuel cycle, from uranium mining to waste disposal. Factual information from this work is regularly provided through publications, information brochures, and seminars. Making more people aware of this extensive global co-operation — and clarifying the international factual basis behind nuclear energy's development in ways more people can understand — are among the public information challenges of the 1990s. — *Lothar Wedekind. — Chief Editor.*

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\* "The MIT International Program on Enhanced Nuclear Power Plant Safety", remarks by Dr Paul E. Gray, Inaugural Conference, 8-9 March 1990, Cambridge, MA, USA.