

Assessment Results for the Deane Conference on the Future of Nuclear Power

Nuclear power generation is experiencing what is frequently called a “rebirth” in the U.S. in the face of growing concerns about our heavy reliance on fossil fuels. The Deane Conference on Nuclear Power was designed to encourage more discussion about nuclear power among college students and citizens. A variety of speakers made presentations over a two-day period on various aspects of nuclear power. Fifteen students from eight colleges and universities also presented research posters on topics ranging from reprocessing to waste storage on Native American lands, as well as on related energy topics including fusion and alternative fuels.

We attempted to assess the impact of the conference by surveying the attendees who participated throughout the two days. While the brief presentations during the conference were thoughtful and informative, nuclear power has many dimensions and we did not expect that the discussions would conclusively alter people’s opinions about it. However, we did think that there was a chance it would affect opinions in some way, both about overall attitudes toward nuclear power and about specific aspects of the topic. The questions were developed in consultation with the senior students in the environmental studies seminar on nuclear power.

We evaluated the conference’s impact by asking the attendees to think about their answers to four questions before the presentations began on Thursday morning. We then invited those who had attended all or most of the discussions to attend a breakout session. These sessions used electronic voting response units to allow attendees to anonymously answer questions that were displayed on a screen. We began by collecting answers to questions that had been asked before the first presentation, and followed up with six additional questions about their attitudes as of the end of the conference. The number of total questions was kept to ten to ensure that the voting could be completed in the allotted time. The questions and the aggregate responses are listed below.

Thirty-two people, almost entirely college students, responded to the survey. Some questions were not answered by everyone, perhaps due to unfamiliarity with the voting response units, so the answers are given in percentages. Every question had at least twenty-nine respondents.

Table 1

Your attitude about nuclear power is best described as:	Pre-conference	Post-conference
Very favorable	9.4%	17.3%
Favorable, with reservations	34.4%	31.0%
Neutral	3.1%	10.3%
Somewhat opposed	31.3%	27.6%
Strongly opposed	21.9%	13.8%

Table 2

Compared to before the conference, your attitude toward nuclear power is:	Post-conference
Much more favorable	9.7%
Somewhat more favorable	25.8%
About the same	41.9%
Somewhat less favorable	22.6%
Much less favorable	0%

The results presented in tables 1 and 2 suggest that the conference affected attitudes toward nuclear power, with approximately 36% of the respondents reporting that their attitude is at least somewhat more favorable, and 23% reporting a shift in opinion toward less favorable.

While the particular changes in attitude may well be a result of the particular topics and speakers selected for the conference, the presence of such changes does indicate that attitudes are not fixed, and that providing information and opportunities for discussion can affect people's attitude toward nuclear power. People appear to place different weights on particular aspects of nuclear power, or react differently to individual speakers, since opinions did not change in a consistent direction.

Note that nearly 60% of those surveyed indicated a change in their attitude; this may have something to do with the information they had before attending the conference. Table 3 indicates that only 41% considered themselves to be well-informed about nuclear power before the conference.

Table 3

How informed did you feel you were about the issues surrounding nuclear power?	Pre-conference
Very well-informed	13.8%
Reasonably well-informed	27.6%
Somewhat informed	34.5%
I was not familiar with the potential benefits and challenges of nuclear power	24.1%

The other questions refer to opinions about the major concerns and possible benefits of nuclear power, as well as the attendee post-conference attitudes about the future of nuclear power. The opinions held by the respondents are reported in the following tables.

Table 4

What did you feel was the most positive potential aspect of nuclear power?	Pre-conference
Reduction in carbon emissions	58.1%
Reduction in particulate emissions	6.5%
Reliability of supply (compared to alternatives)	16.1%
Low kilowatt/hour production cost	6.5%
I don't think it has any positive aspects	12.9%

Table 5

What potential aspect of nuclear power is of most concern to you?	Pre-conference	Post-conference
Long-term waste storage	71.0%	75.0%
Risk of reactor malfunction/operator error	19.4%	9.4%
Risk of terrorism/nuclear proliferation	6.5%	6.3%
Cost of nuclear plant construction	0.0%	6.3%
I do not have any significant concerns	3.2%	3.1%

Table 6

Do you feel that the U.S. should reprocess fuel?	Post-conference
Yes	46.9%
No	21.9%
I'm not sure	31.3%

Table 7

What topic from the conference deserves more public discussion?	Post-conference
Yucca Mountain/long-term storage	15.6%
Reprocessing/fuel handling	21.9%
Reactor design	3.1%
Economic feasibility	15.6%
All of the above	43.8%

Table 8

The future of nuclear power in the U.S. should be:	Post-conference
Continued use at existing level	12.5%
Significant growth as a replacement for coal-fired plants	15.6%
Gradual growth as part of a portfolio of energy sources	46.9%
Gradual phase-out as existing plants are retired	15.6%
Immediate end to the use of nuclear power	9.4%

The Deane Conference on the Future of Nuclear Power has had a demonstrated effect on the attitudes of those in attendance, as measured by the assessment tool. Nuclear power is an extremely complicated issue, and while people are likely to already hold opinions, public discussion may inform and affect those opinions (both in favor of and in opposition toward nuclear power). We hope that the presentations from the conference, available at this web site, will be part of that public discussion.

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