

Bringing Value to ANS: Employers' & Young Professionals' Perspective

A summary of a discussion held by an interdisciplinary panel that will help ANS & other technical professional societies enhance value & improve services provided to their membership.



Collected by the North American Young Generation in Nuclear
at the 2005 American Nuclear Society Winter Meeting
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Editors: Sama Bilbao y León and Amy Buu

1 INTRODUCTION

At the 2005 ANS Winter Meeting held in Washington D.C., the North American Young Generation in Nuclear (NA-YGN) in conjunction with the Operations & Power Division (OPD) organized the panel discussion session entitled “Bringing Value to ANS: the Employer’s & Young Professional’s Perspective”. The idea for this session originated at the NA-YGN/OPD sponsored brainstorming session, “Challenges Facing the Young Generation” during the 2004 ANS Winter meeting in DC, which highlighted a number of potential gaps in the value provided by ANS to the young generation of nuclear professionals. It was then decided to assemble a panel that truly covered the full spectrum of the nuclear industry and organize another brainstorming session to explore in more detail the expectations of ANS members and whether or not the Society is meeting them, focusing in developing feasible ideas to assist ANS to improve the value it provides to its members. The goal of the panel was to bring forth the various challenges & perspectives that the various members of the panel possessed in an effort to identify the areas where there is a gap between the services provided by ANS and the expectations of its members, as well as potential approaches that would help ANS address these concerns and enhance the value of the services they provide to their membership.

2 PANELISTS

As discussed above, for this session to be truly meaningful, it was necessary to bring together a panel of nuclear professionals covering the full spectrum of the nuclear community: all the sectors, all the fields and all the levels of expertise. The interdisciplinary panel assembled included young professionals and managers from the various sectors of the nuclear industry, including vendors, contractors, utilities, national laboratories, universities and consultants. Efforts were made to include representatives of the regulator in the panel, but they were unsuccessful.

The panelists’ involvement in ANS ranged from less than 1 year to over 30 years with a level of involvement going from the very minimum to the maximum. Although this panel represented a small sample compared to the overall ANS membership, the organizers felt it was an adequate cross-section of the Society and would help highlight the differences in the various perspectives.

The panel was composed of:

Kerry Basehore	Director of Nuclear Analysis & Fuel Dominion Generation	<ul style="list-style-type: none"> • ANS Member for 33 years
Amy Cordner	Mechanical Engineer Constellation Energy	<ul style="list-style-type: none"> • ANS Member for 2 years • ASME Member for 4 years • NA-YGN Member for 4 years
Michael Corradini	Chair of Engineering Physics & Distinguished Professor of Nuclear Engineering and Engineering Physics University of Wisconsin - Madison	<ul style="list-style-type: none"> • ANS Member for 30 years • ASME Member for 35 years • ASEE Member for 10 years
Jason Detwiler	Lead Engineer AREVA	<ul style="list-style-type: none"> • ANS Member for 1 year • NA-YGN Member for 1 year
Lee Finewood	Senior Consultant Booz Allen Hamilton	<ul style="list-style-type: none"> • Member of the Geological Society of America for 7 years • Member of the American Geophysical Union for 7 years
Patrick Heher	Nuclear Engineering Graduate Program University of South Carolina	<ul style="list-style-type: none"> • ANS Member for 1 year
Susan Hess	Manager, Strategic Communications and Marketing AREVA	<ul style="list-style-type: none"> • ANS Member for 13 years • National Association of Female Executives for 15 years • WIN Member for 2 years
Kathryn McCarthy	Director, Advanced Nuclear Energy Systems Integration Idaho National Laboratory INEEL	<ul style="list-style-type: none"> • ANS Member for 26 years

David Pointer	Nuclear Engineering Division Argonne National Laboratory	<ul style="list-style-type: none"> • ANS Member for 9 years • ASME Member for 6 years • NA-YGN Member for 4 years • AIAA Member for 2 years
George Tsakanikas	Engineer Bechtel Power Corporation	<ul style="list-style-type: none"> • ANS Member for 1 year • WIN Member for 1 year • NA-YGN Member for 1 year

3 PREPARATORY WORK

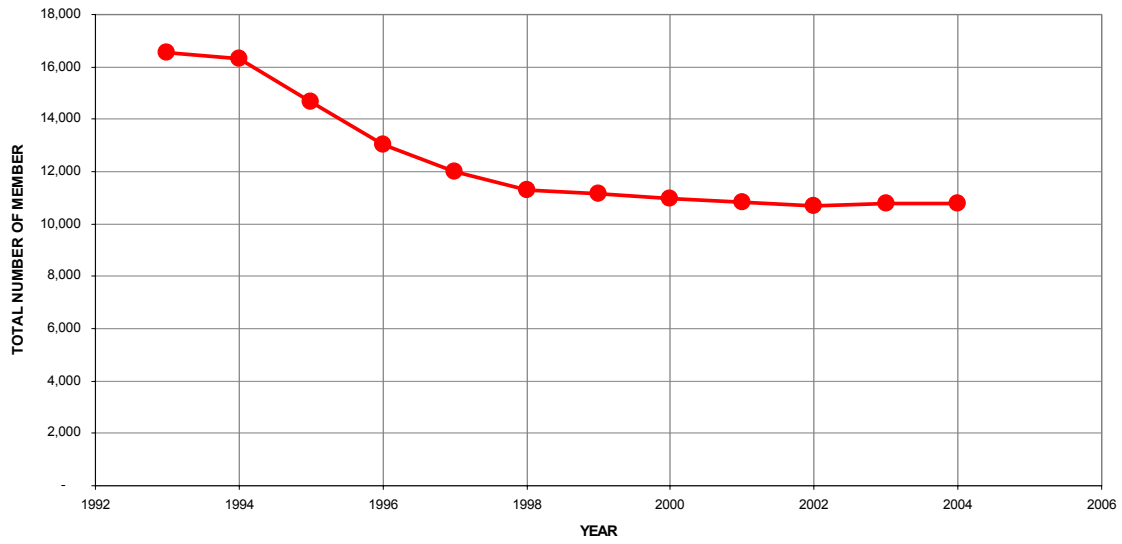
Prior to the conference, each panelist was asked to complete a questionnaire. This questionnaire, which contained several questions and suggested issues to explore, was provided to all the panelists to help them prepare for the session. By answering the questionnaire before-hand, the panel could focus on the relevant issues and brainstorm on possible solutions. The questionnaires were identical for all the panelists, however, the managers received a few additional questions regarding their organizations’ policies supporting ANS. Panelists were also encouraged to benchmark ANS practices with those of other Technical and Professionals Societies (TPSs). The original questionnaire has been included in Attachment 1. In addition, the questionnaire was made available to a miscellaneous group of nuclear professionals close to the session organizers, and their responses were also considered when preparing the session and included in this report. Based on the panelists’ responses and their bios, specific questions were derived to ensure that key points would be brought forth during the discussion. Their feedback was compiled in a set of slides that were shown at the end of the session, to avoid biasing the discussions. Although most of the comments received will be discussed in depth within the body of this report, the summary slides can be found in Attachment 2.

In addition to the subjective answers to the questionnaires, the session organizers provided statistics on ANS membership trends and ANS meeting attendance¹ to prepare for the session. This research showed a sharp decline in ANS membership around 1995, and a much slower decline in recent times. At this point, ANS membership has reached a balance between the number of new members recruited each year, and the number of departures, and despite considerable efforts to recruit new members, the overall ANS membership has not significantly grown. Interestingly, one of the three most common reasons mentioned when dropping ANS membership was “lack of value”. These statistics

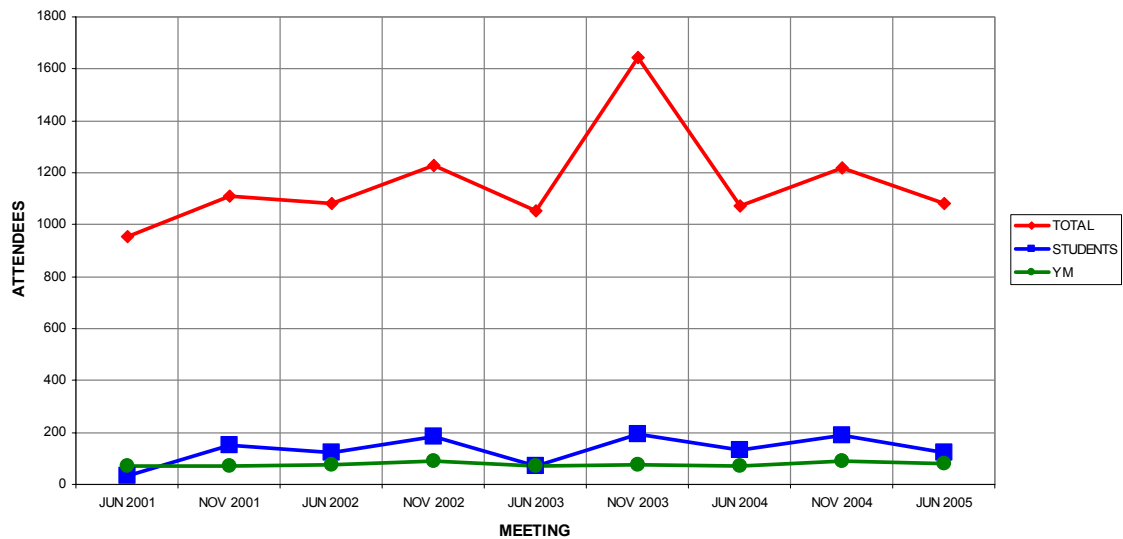
¹ These numbers were provided by ANS Staff or obtained from the 2005 ANS Membership Plan.

also show that overall, the ANS membership is growing older, about half of the student members do not renew their membership when they graduate, and young professionals in general are not seeing the value of the ANS membership. Also noted is the decline in the number of members from the utility sector and an increase from non traditional NS&T applications.

ANS MEMBERSHIP TRENDS (1993 - 2004)



ANS NATIONAL MEETINGS ATTENDANCE



4 SESSION SUMMARY

In order to have an innovative, interactive and candid session, the facilitators selected a “talk show” format, creating NA-YGN’s talk show “Splitting Issues with Bilbao & Buu” with the “Hot Topic” of “Bringing Value to ANS: Employer’s & Young Professional’s Perspective”. This format proved to be conducive, as issues were explored that helped uncover various concerns, challenges and possible solutions to help ANS improve and enhance the value of services provided to its members.

The organizers focused the discussions to answer two main issues. First, the session explored the value provided by ANS to each of the panelists and whether or not this value matched their expectations. Second, since meetings are one of the key issues when it comes to assess the value provided by ANS, a substantial amount of time was devoted to examining this issue in a lot more detail.

The following is a summary of the comments made by the panelists and members of the audience.

Membership Expectations & Value Provided

According to the panelists, the main reason nuclear professionals join ANS is for the networking opportunities. ANS meetings provide an adequate venue for nuclear professionals to present their technical work for peer review and advice and are also the best way to acquire recent and relevant technical information. Another one of the top reasons to join a TPS such as ANS, though mainly within the academic and scientific world, is to increase the number of publications in one’s resume.

Most panelists, particularly young professionals, saw their involvement in technical professional societies as an opportunity to make great strides and get noticed in a short period of time, especially if approached by executive management to be actively involved. Being active in ANS and getting involved in the governance of the Society is an excellent way to demonstrate ownership and personal responsibility in the direction that the industry in general and the ANS in particular are taking. Participating in ANS activities is also a good way to perform outreach in support of the industry and to demonstrate its vitality.

Some members of the audience, however, pointed out that many times young professionals are very concerned about what is it that ANS can do for them and their careers, but rarely stop to consider what is it that they can do to contribute to ANS. In fact, most active members agree that the more than one puts into ANS, the more that one gets out of it.

For students, their ANS membership certainly provides a lot of value. Not only do they get to know other students from all over the country and some times the world, but they also have an opportunity to network with experts in their fields of interest and/or

prospective employers. The Society also provides numerous grants, travel stipends and scholarships. Student attendees mentioned how their involvement in ANS has been a very rewarding experience for them and how they feel support and encouragement from their more experienced peers.

Young Professionals, however, pointed out that ANS support virtually disappears after graduation. Since companies often use seniority as a way to decide support to technical professional society activities, many of these young professionals find it difficult to continue their active involvement in ANS once they start their professional careers. It was pointed out that this issue will be somewhat alleviated with the newly created ANS Young Members Group (YMG), thus showing ANS's commitment to young professionals and increasing their roles within the Society.

At the company level, managers explained that company participation in ANS functions is a good mechanism to receive recognition for the company's contributions to the industry and/or share their experiences. ANS activities are a great opportunity for benchmarking and to share knowledge, which in turn makes the industry stronger. ANS technical standards are very valuable to the industry to improve the safety, the performance or the economics. Companies recognize that a strong and dynamic ANS is the best ambassador for the industry, helping nuclear professionals and prospective employees perceive the vitality and the future of the industry. Furthermore, sponsoring employees to attend ANS meetings and events is a good morale booster that provides motivation and inspires commitment to the industry and the company. It is also good means to help keep their skills current and up-to-date, and to improve their communication and teamwork skills.

Some managers, however, stressed that companies are more likely to sponsor employee involvement in local events and activities than in far-away national-level events. This type of involvement has a very direct and visible impact on activities relevant to the company because members can make a more significant difference in their local areas. For these managers the true impact of the society is at the home front. Getting involved at the local level has most of the advantages of being active in the Society, and minimizes the cost and time drawbacks. It is also an opportunity to increase networking opportunities amongst members that typically do not attend industry meetings.

Being involved in the Society increases exposure within the Society as well as provides a different mechanism to learn about the inner workings of a technical professional society, which is unique compared to normal work environments. Being involved is encouraged, especially if members would like to drive change within the Society. Membership should be seen as a tool for personal growth and leadership.

However, ANS is perceived to have too much bureaucracy, which makes it difficult to break into opportunities. Some attendees felt that there is some internal segregation of groups within ANS, and this can make it difficult for new members to get involved in the governance of the society. While in recent times there has been a lot of focus in promoting mentoring and getting students and young professionals more engaged in the

Society, these younger members are still not treated as equals. ANS is still perceived as an organization focused in the past and very slow to react to change. Today's students are enticed by t-shirts ("Gen X for Gen IV"), music, Starbucks coffee, etc. The more exciting ANS becomes, the more likely they will be influenced to be more actively involved. ANS needs to take some of these ideas to bring in new talent into the Society.

Historically, within ANS and its divisions, there was a perception amongst the young professionals that their presence and participation was not necessarily wanted. However, the environment is changing and every member's participation is essential to the vitality of the society. Also, the dynamics of the membership is changing and the society's organizational governance should be reviewed to adjust for the change. What has worked in the past does not seem to be working in the present, so changes must be made to enhance the future.

On the other hand, members felt that ANS recently has made tremendous strides in ramping up the Society's outreach and public communication efforts, with a lot of success. Speakers agreed that although some times slow to react, ANS is making exceptionally positive contributions to counteract the antinuclear rhetoric.

Another recommendation was to send out a survey to members to understand their reasons for being involved or not. ANS Young Member's Group already created an on-line survey which fulfills this recommendation. The survey is available on <http://ymg.ans.org/>

It was also discussed to benchmark to other TPSs to learn more about their methods to improve their services to its membership.

Meetings

It was apparent from the discussions that one of the most visible benefits of being a member of ANS is the ability to participate in the ANS sponsored meetings. And for that reason, this was one of the most controversial issues.

In general, there was some consensus that national ANS meetings are expensive: high registration fees, expensive hotels, and expensive social events. Some speakers, however, performed some benchmarks and compared the meeting attendance costs of ANS to other organizations such as ASME and IEEE, and concluded that ANS registration fees are in line with the registration fees for meetings of other technical and professional societies.

Companies struggle to send employees to industry meetings due to the number of competing meetings that are relevant to their company's overall goals and needs. The high cost structure for such conferences conflicts with the industry's paradigms to reduce costs and increase quality. There are many meetings they must participate in and attending industry meetings becomes low on their priority list. Employees are selected to attend meetings based upon budgetary capability as well as their level of involvement, especially if their technical paper was selected to be presented at the meeting. Due to the

high cost structure (i.e. registration fees, hotel costs, etc), it is difficult for companies to justify sending employees for solely the sake of increasing their industry exposure and awareness.

Universities receive outside funding (aka gift funds) to help support the costs of travel & logistics for students to participate in industry meetings. The amount of these gift funds determines their ability to send students to industry meetings.

For members in research and academia, attending Society meetings is almost considered a part of their job and as such these expenses are normally funded by their research projects. However, at a time when all research budgets are shrinking, it has become necessary to pick and choose which meetings to attend. For example, a three-year grant might provide \$1000 per year in travel, which means one meeting per person per year.

The attendee selection process varied amongst the labs, universities and vendor, in the following ways:

- Labs
 - Identify proposed costs from each potential participant, their involvement and then they are ranked. New employees may attend a meeting one time, however, will not be permitted to go again if they are not actively involved in the society.
- Vendor
 - Technical papers and/or participation are conducted with management oversight to ensure there is the appropriate number of people attending the meeting.
- Universities
 - Active students are encouraged to attend, however, with limited resources, they must determine their financial feasibility to attend.

It was pointed out that even though attendance at national ANS meetings has remained constant and even grown a little in recent years, the total number of attendees from the electric utilities has remained extremely low.

It was interesting that for some members of the academic and research communities, ANS meetings are too focused on fission and nuclear energy, while most members of the nuclear utilities felt that the content of ANS meetings is too academic and abstract, and there is very little that can be directly applied to improve the performance of existing nuclear units.

One of the ideas suggested to lower the costs of meetings was to organize the summer meetings at a university campus. This would make attendance to the meeting cheaper, would give students the opportunity to get more involved in the organization of the meeting and the Society in general, and would allow the members to visit the most cutting edge experimental facilities in the US.

It was also noted that one of the reasons that ANS needs to use such large and expensive hotels is because we have many simultaneous sessions. In this sense, it was mentioned that in many occasions there are related sessions that could have been merged and co-sponsored by two divisions. This is in part due to the fact that ANS has too many divisions for the number of members. It is also due to the metrics and rewards that ANS imposes on their professional divisions, which do not encourage the co-sponsorship of technical sessions. This results in many sessions being poorly attended due to competition with related sessions on the same time slot. This also has resulted in a proliferation of panel discussion sessions that sometimes do not seem to have the technical depth of sessions containing actual technical papers. The program committee must take a more thorough review of the program such that those similar discussions are not held. It was also discussed that each technical division be actively involved in the planning process to ensure that all possible synergies are considered. It was also suggested to use more poster sessions to showcase summaries (as opposed to full size peer reviewed papers) because it would save meeting space and still provide adequate exposure to the authors.

There is a growing concern on the number of divisions that exist within ANS such that quantity becomes a priority versus quality. Sessions tend to be redundant across divisions and the bureaucratic structure of the society creates an unnecessary complexity for a volunteer organization. While it is very nice for ANS to want to satisfy all the new subjects and specialties in Nuclear Science and Technology, thus attracting new members into the Society, it seems that it should be done by integrating and synergizing instead of further dividing. An action to benchmark NA-YGN's organizational structure and their ability to complete actions was suggested as a reference for ANS' strategic direction.

Another suggestion made to ensure that ANS meets the needs of all potential subjects and specialties without an unreasonable proliferation of professional divisions was the "Matrix" approach. This matrix would have two dimensions; one dimension is a list of fundamental science areas: thermal-hydraulics, reactor physics, materials, math & computational sciences, environmental sciences, etc. The other dimension would be application areas: fission reactors, accelerators, space, fusion, medical, etc. Potentially, a third cross-cutting dimension could be member demographics, such as students, young members, utility members, research and development members, etc. In the end, the key element of this approach would be not to divide the ANS further, but to require that every session have genuine collaboration between entities on different dimensions of the matrix, for example, a session on "thermal-hydraulics of accelerator systems" or a session on "environmental science of fusion systems".

One of the big advantages of ANS meetings, particularly for young members and non-technical personnel, was that the information is provided such a way that it is in a non-threatening environment, which is ideal for members who are interested in getting up-to-date information on the latest and greatest techniques, innovations, etc. of the nuclear industry.

Presentations at national meetings are seen as an opportunity to hear how technology is being applied and to determine the feasibility of it being leveraged within the member's own organization.

Information provided should be greater in detail such that it is more relevant and applicable to members. Information presented at the topical meetings is seen to be more valuable due to their technical depth than the presentations at the national meetings. A recommendation to remedy this issue was to have full technical papers submitted versus summaries.

A mechanism to provide free workshops or short courses on specialized topics may increase participation, such that members will feel they are continuing their education of their chosen specialty as well as increasing their industry awareness.

Information needs to continue including the bigger issues that impact the industry, such as government policies and Wall Street. ANS could be more relevant as it is the nexus of the industry.

Information must be provided in a logical, clear fashion and speakers must know how to deliver a presentation. Provide more guidance to speakers in how they present their technical information to a large audience.

Both vendors and national laboratories agree that attending national industry meetings is an opportunity to recruit new personnel, especially students.

5 CONCLUSION

Members' involvement is necessary for the vitality of the society; therefore the more engaged the membership is, then the more valuable the society will be for the members at large. ANS is currently developing a strategic plan to address many of the issues described above and highly encourages members who wish to see a change to be part of the change process. The goal of this session was to provide constructive criticism to ANS, and provide suggestions and ideas on how to better fulfill the needs of its members. All the comments compiled herein were made in this constructive spirit and are provided here in case they can be useful to the leadership of the Society. This is a dynamic time for the nuclear industry with new plants on the horizon and the proper steps must be taken such that the Society can maintain the momentum.

ACKNOWLEDGMENTS

NA-YGN wishes to thank all of the panelists and their home organizations for the time and effort devoted to this project, during the preparatory stages, at the session, and with the preparation and review of this report. Margaret Mkhosi and Joshua Peterson were also key in capturing the discussion held during the session and we'd like to offer our sincerest gratitude for their excellent note-taking skills. NA-YGN also wants to express its appreciation to Rod Adams who provided the audio transcripts of the session. Lastly, we thank the many other ANS members that have contributed to this report by providing their constructive feedback and ideas on how to help ANS increase the value it provides to its members, including the session's audience and in particular Mark Anderson, Brian Mays and Paul Wilson.