

2014 NAYGN

Career Report

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Table of Contents

Fable of Contents 5
Table of Figures
. Executive Summary7
I. Introduction
II. Methodology and Data Collection9
V. Demographic Information10
/. Salary and Raise Results17
/I. Work Hours Results
/II. Job Satisfaction Results
/III. NAYGN Related Results
X. Knowledge Transfer and Retention (KT&R) Results
۲. Trends from Open Response Questions
KI. Conclusions and Recommendations
KII. Acknowledgments
Appendix A: Survey Questions45

Table of Figures

Figure 1: Years of Experience	10
Figure 2: Highest Level of Education	11
Figure 3: Current Position	12
Figure 4: Current Company Type	13
Figure 5: Respondents' Job Functions	14
Figure 6: Engineering Respondents' Positions	15
Figure 7: Operations Respondents' Positions	16
Figure 8: Starting Base Salary	17
Figure 9: Current Total Salary	18
Figure 10: Current Total Salary by Job Function and Experience	19
Figure 11: Current Total Salary by Job Function and Education	20
Figure 12: Current Total Salary by Company Type	21
Figure 13: Average Starting Salary by Internship Experience	22
Figure 14: Time to First Pay Raise by Overall Job Satisfaction	23
Figure 15: Eligibility in Alternative Work Arrangement Programs	24
Figure 16: Weekly Working Hours Compared to the Job Level in Organization	25
Figure 17: Weekly Working Hours in Different Company Types	26
Figure 18: Total Annual Salary Compared to Hours Worked Per Week	27
Figure 19: Overall Job Satisfaction	28
Figure 20: Importance of Factors Affecting Job Satisfaction	29
Figure 21: Satisfaction with Factors Impacting Job Satisfaction	29
Figure 22: Respondents Seeking New Employment	30
Figure 23: Reasons for Seeking New Employment	31
Figure 24: Job Satisfaction Compared to Hours Worked per Week	32
Figure 25: Job Satisfaction Compared to Seeking New Employment	33
Figure 26: NAYGN Satisfaction Compared to Job Satisfaction	35
Figure 27: NAYGN Satisfaction Compared to Percent Actively Seeking New Employment	35
Figure 28: Most Effective Knowledge Transfer Tools and Methods	37
Figure 29: Least Effective Knowledge Transfer Tools and Methods	38

I. Executive Summary

Since the formation of NAYGN in 1999, this organization has sought to be the voice of the young generation in nuclear. This survey and accompanying report represent an opportunity for young professionals in nuclear energy to provide their feedback and perspective on their careers.

As in previous surveys, this report addresses several main topics relevant to NAYGN members and their career, including: demographic information, salary, work hours, job satisfaction, and knowledge transfer. Participants were also asked to rate their satisfaction with NAYGN and the opportunities NAYGN offers.

Analysis of the collected data provided new insights and confirmed existing conclusions about the young generation in the nuclear industry. An overwhelming majority of young professionals remain satisfied with their jobs, their companies, and with NAYGN. As expected, a strong correlation was found between job and NAYGN satisfaction. Factors with the most importance to job satisfaction are salary, advancement opportunities (both compensation and positional) and a healthy work/life balance. Satisfaction in these top areas decreased from the last time the career report was published in 2012. Eligibility and participation in alternative work arrangement programs decreased; total salaries decreased from 2012 while average working hours increased.

Members of NAYGN continue to be actively engaged in their career and have a passion for their industry. The majority (five out of six) of surveyed members remains satisfied with their jobs; two thirds are not actively seeking new employment opportunities.

II. Introduction

In 2012, NAYGN surveyed its members to capture data that represents the voice of the young generation in the nuclear industry. Due to the success of the 2012 report, NAYGN repeated a very similar survey in 2014. Questions on knowledge transfer and retention (KT&R) were added to this year's survey. With the changes in personnel across our industry, these questions were added to collect data on current KT&R programs as well as address the need for more program opportunities. For the 2014 survey, about one-third of our active members provided their thoughts and opinions.

III. Methodology and Data Collection

The development of the 2014 NAYGN Career Report occurred in three phases from October 2013 to April 2014. Survey methodology, data collection and analysis were the focus during the survey creation and analysis phases. The third phase, report writing, was the final phase that gathered conclusions and made recommendations based on the data.

During survey creation, the Benchmarking Committee agreed to use the same survey questions from the 2012 NAYGN Career Report. The goal is to maintain a consistent survey to allow trending of data year over year. The survey continued to focus on several areas of interest, such as demographics, salary, career satisfaction, NAYGN satisfaction, and work hours. Minor changes to survey questions included:

- Added gender to the Demographic section (optional response)
- Added Knowledge Transfer and Retention (KT&R) questions in lieu of creating a separate survey
- Removed survey question regarding Fukushima
- Increased opportunities for members to provide open comments on survey topics
- Provided clarity to include internship and management options for answers

The survey had a total of 40 questions which were divided into pages according to the relevant areas. Some questions were branched depending on the response provided. This branching allowed for a deeper analysis in some areas. With the addition of the KT&R questions this year, the committee focused on maintaining a survey for NAYGN members that would be short in length and response time. Seventy-two percent indicated the length of the survey was just right. Based on lessons learned from previous career surveys and reports, fill-in-the-blank answers were kept at a minimum to support data analysis. Open response question feedback and conclusions are included in the report.

The survey was open from October 17, 2013 to November 15, 2013. The link for the survey was provided to all NAYGN members via email in the NAYGN Membership Announcements and a Local Chapter Lead Brief. Of the 3000 active NAYGN members, there were 928 respondents, leading to a response rate of 31%. Of the total respondents, 780 were age 35 years or younger, which accounts for 84%. All survey responses were anonymous.

Analysis was prepared based on similar results from the 2012 Career Report. When applicable, trends between 2012 and 2014 have been noted in the report. To provide clarity on some graphs, a few of the response categories were combined as noted. An extensive amount of effort was placed on analysis to ensure that accurate, beneficial, and clear information is reported to stakeholders. To be consistent for all graphs, only responses from members 35 years of age or younger are included, unless otherwise noted.

IV. Demographic Information



Figure 1: Years of Experience

Figure 1 shows the working experience of the respondents in their current company, total throughout career and in the nuclear industry. It was found that 96% of the respondents have been in their current company for eight years or less. From the total data analyzed 92% have been in nuclear industry for the last eight years or less. Finally, 83% of the respondents have eight years or less years of throughout career experience; this seems reasonable since the analyzed data addresses respondents under 35 years old only.



Level of education was surveyed and the majority of young nuclear professionals have at least some level of college education (Figure 2). More than 90% of respondents have a bachelor and/or graduate degree. The number of respondents with a graduate degree increased 4% from 2012, while those with a bachelor degree decreased from 70% in 2012 to 63% in 2014.



Based on the responses gathered in the survey, almost half of the respondents are individual contributors in their company. Approximately 21% of the young professionals who participated in the survey are in either senior or supervisory positions. The remaining 29% are in entry level positions.

This breakdown is consistent with the data collected in 2012.



Figure 4 indicates that close to 60% of the respondents work in nuclear utilities. It is evident from the analyzed data that less than 1% of the respondents work in academic organizations. Those who work in industry groups or government organizations make up less than 6% of the responses.



Figure 5 plots the respondent's job functions. Responses from NAYGN members in a wide range of job functions are represented in this survey.

Due to a low response rate from certain groups, some job functions were combined into job functions with similar salary ranges as follows:

- 1. Science (health physics, radiation protection, etc.) and Engineering were combined and are represented as "Science and Engineering."
- 2. Maintenance/Technical and Operations were combined and are represented as "Maintenance and Operations."
- 3. HR/Communications, Security, and Learning/Training were combined and are represented as "Other (HR, Security, Training)."



There is a diversity of engineering background within the nuclear industry. It seems that majority of the engineer respondents are mechanical engineers (almost 40%), while 25% are nuclear engineers and the remaining 35% consists of professionals in various fields of engineering. Based on the data, nuclear engineers do not represent the majority of engineers in nuclear energy.



Figure 5 showed that 13% of respondents are from Maintenance and Operations. As shown above in Figure 7, of this group, 28% indicated that they work in maintenance, 33% are licensed operators, and 39% are non-licensed operators. In 2012, maintenance represented 42% of respondents, showing a decrease this year of 14%. In Operations, both licensed and non-licensed increased, 6% and 7% respectively, compared to 2012.

16

V. Salary and Raise Results



Figure 8: Starting Base Salary

Note that all salary results in this report are adjusted to US Dollars.

Figure 8 plots the distribution of starting base salaries in the nuclear industry. Seventy percent of respondents started with a base salary between \$50,000 and \$70,000. Approximately 1.3% earned over \$100,000 (an increase of 0.4% in 2012). The average starting base salary was \$60,231. The average starting salary for a bachelor's degree is \$59,670 while the average starting salary with a graduate degree is \$63,829.

Current Base Salary

Considering current base salary (without overtime and bonuses), 52% of respondents reported a current base salary between \$60,000 and \$80,000. Nine percent reported over \$100,000 as a current base salary. The average current base salary is \$76,443; this is a 2% increase over the 2012 results. Current salary was compared to individuals actively seeking employment. This comparison gave no conclusive results.



Figure 9 plots the distribution of current total salaries (including overtime and bonuses). Thirty-nine percent of respondents have a current total salary between \$60,000 and \$80,000. Forty-four percent earn less than \$70,000, and 18% earn over \$100,000 total. The average total current salary is \$84,552, a decrease of 4% from the 2012 results. The 25th percentile current total salary is \$69,663, and the 75th percentile current total salary is \$95,000, a decrease of 5% from 2012.

Average salaries are equal between genders for members of the young generation new to the industry (less than one year experience) in technical positions (engineering, science, operations, maintenance and training). Total salaries for young male members in those fields with less than 6 years of experience are on average 3% higher than their female counterparts. An insufficient amount of data was collected outside those bounds (for non-technical positions and 6+years' experience) to yield any conclusions or observations.



*Less than 10 respondents in this category

A summary of changes shown in Figure 10 compared to 2012 is shown below.

Years of Total Workforce Experience	Total Salary Change
0-2	+2.8%
3-5	-2.8%
6-7	-7.1%
8-10	-9.2%
10+	+5.5%

For Figures 10 and 11, due to a low response rate from certain groups, some job functions were combined into job functions with similar salary ranges as follows:

- 1. Science (health physics, radiation protection, etc.) and Engineering were combined and are represented as "Science and Engineering."
- 2. Maintenance/Technical and Operations were combined and are represented as "Maintenance and Operations."
- 3. HR/Communications, Security, and Learning/Training were combined and are represented as "Other (HR, Security, Training)."



Figure 11: Current Total Salary by Job Function and Education

^{*}Less than 10 respondents in this category



Figure 12: Current Total Salary by Company Type

^{*}Less than 10 respondents in this category





Average starting salary was compared to internship experience (Figure 13). Those who had any type of internship received an average starting salary 11% higher than those without an internship; this is a large increase compared to 2012 when the data reported 2%. Internships provide a boost in overall value to companies as evidenced by the information presented, regardless of whether the internship is inside or outside the nuclear industry.



Raises and Increases in Responsibility

Forty-eight percent of respondents who have received a raise received it within their first year of work experience. Seventy percent received their first raise within their first two years. Forty-eight percent of respondents who have gotten an increase in work responsibility received it within their first year of work experience. Seventy percent received their first increase in responsibility within their first two years. Those working between 35 hours and 55 hours per week received their first raise an average of 19 months after starting their careers.

Career satisfaction was compared to time to first pay raise (Figure 14). Those who were dissatisfied or very dissatisfied with their jobs received their first raise an average of two months later than those who are satisfied or very satisfied with their jobs. Those who were very satisfied with their jobs received their first raise in about 85% of the amount of time it took for those who were very dissatisfied.

VI. Work Hours Results



Figure 15: Eligibility in Alternative Work Arrangement Programs

Figure 15 plots the survey results for a variety of alternate work hours arrangements. Most respondents work a 9/80 schedule (80 hours over 9 days) followed by 4/10 Schedule (4 days per week, 10 hours per day) and flexible hours. Most of the respondents (close to 93%) are not eligible to participate in part - time employment (less than 1% of the respondents participate in part time employment). Survey results also show that only a small percentage of respondents (less than 6%) participate in telecommuting, with over 80% not eligible for telecommuting.

The results of the data analysis indicated that the majority of respondents (56%) work an average of 40-45 hours per week, independent of the type of company at which they work (See Figure 9). The number of respondents working less than 35 hours is negligible. The remaining respondents rarely work more than 60 hours per week.



Figure 16: Weekly Working Hours Compared to the Job Level in Organization

Figure 16 shows the relationship between average hours worked per week and the position-level the respondents' hold. This data is consistent with results reported in 2012, with no increase in work hours of more than 1.5% for any position-level in 2014.



Figure 17: Weekly Working Hours in Different Company Types

Figure 17 compares hours worked per week to company type. From 2012, government and industry group jobs have held at similar levels while nuclear utilities and vendors have increased almost a half hour each.

^{*}Less than 10 respondents in this category



Figure 18: Total Annual Salary Compared to Hours Worked Per Week

Figure 18 compares the total annual salary (including bonuses and overtime) to hours worked per week, showing that there is a positive correlation to total compensation and work hours. This also indicates that the majority of survey respondents are paid overtime for working extra hours. It appears there is a positive correlation between hours worked and salary for most segments except the >60 column. After the 60 hour mark, the rewards of working more overtime start to diminish.



Overall job satisfaction is shown in Figure 19. Responses for satisfied or very satisfied totaled 83%, approximately 2% lower than in the 2012 survey. Only a small portion of respondents indicated they are very dissatisfied with their jobs.



Figure 20: Importance of Factors Affecting Job Satisfaction





Survey data indicates, factors that most highly affect job satisfaction continue to be: Work/Life Balance, Salary & Salary Growth, and Advancement/Growth Opportunities. These priorities are unchanged from 2012 data. NAYGN members are most satisfied with: Colleagues, Location, Benefits, and Work/Life Balance. Although satisfaction remains high, there was a decrease in satisfaction from 2012 in the top 3 most important factors impacting job satisfaction. Satisfaction in areas of benefits, corporate culture and training opportunities also decreased.



Figure 22 displays the responses for NAYGN members asked if they were seeking new employment, and if so, within or outside of their company and the industry. Thirty six percent of respondents are currently seeking new employment; this is approximately 3% higher than in 2012. The 3% increase is seen in the category of those seeking new employment outside and inside of the nuclear industry. There was also a slight increase seen in the category of those looking outside of their company but still within the nuclear industry and a slight decrease in those looking inside of their company.

Reasons for the increase in respondents who are seeking new employment can be gathered from the open responses to the survey question, "What is your outlook on the future of careers in the nuclear industry?" Of those who expressed concern with the future of nuclear industry careers, their concerns generally centered on the topics of jobs moving overseas, cost and regulations hindering growth, and nuclear industry publicity and communications.



The top reason for seeking new employment, as seen in Figure 23, is the lack of Advancement/Growth Opportunities. This is consistent with 2012 survey results. Other factors affecting employment searches are "Salary & Salary Growth" along with "Location" and "Challenging Work". "Location" is a larger influence this year than in 2012, and outranked "Challenging Work". Members also ranked "Benefits" as being a more important reason for seeking new employment in the 2014 survey vs. the 2012 survey.



Figure 24: Job Satisfaction Compared to Hours Worked per Week

* Total Number of respondents in "<35 hours" and ">60 hours" were too small to be considered in the conclusions made.

Figure 24 compares job satisfaction with hours worked per week. Respondents working between 35-50 hours per week are the most satisfied with their job. As working hours exceed 50 per week, satisfaction begins to decline. This is consistent with the 2012 data results.



Figure 25: Job Satisfaction Compared to Seeking New Employment

Figure 25 compares job satisfaction with whether respondents are seeking new employment. As expected, respondents that are the most satisfied are not seeking new employment. As satisfaction decreases respondents begin to look for employment opportunities inside of their companies, outside and inside of the nuclear industry, then outside of their company but still within the industry and lastly, outside of the industry.

VIII. NAYGN Related Results

Members were surveyed about how important the different NAYGN benefits are to them, and how satisfied they are with NAYGN in each of these areas. The NAYGN benefits under consideration are leadership skill development, soft skill development, public outreach, networking, and industry executive interaction. The average response was that every benefit is important to our members, with networking and leadership skill development being ranked as the most important. Survey respondents indicated that they are satisfied with NAYGN's performance in providing these benefits to members, and there was no statistical difference in the level of satisfaction between each of the benefits. Total NAYGN satisfaction was compared to career types, and participants within HR/Communications were found to be the most satisfied with NAYGN while those in security positions were the least satisfied.

NAYGN satisfaction was compared to career satisfaction (Figure 26). NAYGN satisfaction was also graphed along with the percentage of respondents who are actively seeking new employment (Figure 27). Both figures show correlations between job and NAYGN satisfaction. Those who are satisfied with their jobs tend to be more satisfied with NAYGN, and those who are satisfied with NAYGN are less likely to be seeking new employment. While this is similar to what was seen in the 2012 report, there was an overall increase in the number of people actively seeking new employment independent of satisfaction with NAYGN or current job.





Figure 27: NAYGN Satisfaction Compared to Percent Actively Seeking New Employment

IX. Knowledge Transfer and Retention (KT&R) Results

Survey participants were asked about the status of their company's Knowledge Transfer and Retention programs. Thirty-nine percent of respondents reported having an official knowledge transfer and retention program. Out of that segment, 70% reported being included in their program. Thirty percent of those without formal KT&R programs answered that their companies were currently developing a program.

Members were also asked to grade common tools and methods for knowledge transfer. Responses were not restricted to individuals included in formal programs.

Figure 28 ranks the most effective tools/methods and Figure 29 ranks the least effective ones.



Figure 28: Most Effective Knowledge Transfer Tools and Methods

Survey respondents indicated that they find informal mentoring, professional communities, and procedures to be the most helpful means for capturing information. Informal mentoring is generally more inclusive and more abundant. It's ranking on this index shows that people within the nuclear industry are willing and capable of sharing valuable information to help cultivate the next generation.

Professional communities, which include NAYGN and other similar organizations, ranked as the second most effective tool/method for knowledge transfer. These tend to be encouraged and well supported by most companies. Professional communities offer a lot of opportunities for development, information sharing, and networking. Relationships cultivated through involvement in these groups may also expand the opportunities for informal mentoring.

Procedures were ranked as the third most effective means of knowledge transfer. However, written comments vocalized concern for procedures being the only means of knowledge transfer and training. Well-constructed procedures are an excellent tool for capture information and ensuring consistent performance of activities, but it must be paired with hands on experience. Providing written content is helpful, but companies must pair it with real world experiences.



Figure 29: Least Effective Knowledge Transfer Tools and Methods

However, job turnover, succession planning, knowledge databases, and formal mentoring were ranked as the least effective.

Job turnover and succession planning tied for the top least effective tool/method. Based on the written comments, job turnover and succession planning are desirable and positive experiences when they occur. However, they do not appear to be happening very frequently. Respondents' report that they often take over a position long after the previous person has already left. There is no opportunity for job turnover. Additionally, succession planning is perceived as being inadequate or nonexistent.

Knowledge Databases were ranked as the second least effective. Multiple respondents commented that companies do not dedicate enough time to the process of knowledge transfer which can contribute to inadequate knowledge databases.

Formal mentoring was ranked as the third least effective method of knowledge transfer. Formal mentoring relationships are narrower in scope and exposure. Programs that pair new employees with specific senior employees have a targeted focus and time restrictions. While the experience is still important and warrants continued use, it cannot replace the experiences from spontaneous, unrestricted sessions.

X. Trends from Open Response Questions

Of the 900+ responses to this survey, over half of the responses contained feedback in the open comment sections. All open comment responses from the career survey were reviewed by the survey team. Comments were grouped into categories based on their contents, and then specific comments were chosen to best represent the main themes. NAYGN member feedback was gathered from responses to this survey's three open response questions/topics:

- 1. What is your outlook on the future of careers in the nuclear industry?
- 2. Please provide any additional insights about your Knowledge Transfer and Retention program
- 3. Please provide your feedback or comments on any of the topics addressed in this survey

The overall theme from all of the open comment responses was "communication is key." Whether it's communication between nuclear industry executives and employees, employee to employee, the nuclear industry and the public, or the NAYGN organization and its members, NAYGN members believe that communication is something that our industry needs to continuously improve.

1. Outlook on the Future of Careers in the Nuclear Industry:

Feedback on this topic was the most voluminous of all the open response questions. Responses were roughly categorized as having a positive, neutral, or negative outlook on the future of careers in the nuclear industry:

Comment Type	<u>% of Responses</u>	
Positive	45%	> 71% Desitive - Neutral
Neutral	26%	
Negative	29%	

The major themes contained in these responses were:

- Jobs will move overseas in the future
- Regulations and cost will hinder the nuclear industry's success and future growth
- The nuclear industry needs better publicity and communications
- General industry plus/delta

Examples of comments addressing these themes:

"The Industry needs to figure out how to have more influence globally if our generation is going to have a bright future."

"...Nuclear technology is continuing to improve. Nuclear energy is the best way to meet growing global demand for electricity."

"I am concerned about whether or not the nuclear industry will have long-term, challenging work with advancement and growth opportunities for the life of my career. I don't think it's very exciting for someone who is just starting their career to enter an industry that looks like it's on the way out the door in the US. Nuclear industry executives certainly don't seem very optimistic about the future either..."

"I'm concerned with more nuclear plants shutting down than being built in the US that 20 years from now I won't have a career and the skills I learned from nuclear won't be applicable to other industries."

"I think the nuclear industry is at a "fork in the road". The culture of continually adding additional requirements/regulations to an industry that is already overburdened must be addressed. The advent of low cost natural gas and increasing cost of operating nuclear power plants makes the nuclear industry at risk in my opinion for a steady decline unless the culture is addressed."

"The future is bright for nuclear employment but the industry must do more to communicate to the public. A grassroots approach is needed because the leadership in the industry are not leaders in this area. Change is needed."

"There are current and coming challenges, but I believe the nuclear industry is here to stay. Making it more affordable is essential."

2. Knowledge Transfer and Retention Comments:

The themes contained in these comment responses were as follows:

- Not enough is being done to capture knowledge before it leaves
- Young professionals are not given enough turnover time or mentoring with experts prior to their retirement
- Company headcount and/or resources don't allow for young professionals to have enough onthe-job time with experts
- Young professionals are eager for more knowledge transfer opportunities
- Young professionals appreciate written procedures, but they recognize that the most effective learning is usually accomplished through experience

Examples of comments addressing these themes:

"While there is not a defined KT&R program in my division of the company, management is intentional about placing young engineers in groups with older engineers to facilitate knowledge transfer and retention... it is a great benefit to have many semi-retired nuclear utility workers working alongside the young engineers." "I think many companies have the right approach to KT&R programs but implemented them too late. In my company the experts are retiring before the program has had time to be fully effective."

"There is a lot of talk about Knowledge Transfer and Retention, but it doesn't seem like any clear or discernible progress is being made. KT&R requires resources, and many companies just don't seem willing to invest time and energy in effective KT&R."

"We don't identify and bring in replacements before the expert leaves and can provide the knowledge transfer."

3. General Survey Comments:

General feedback on the survey was analyzed and incorporated into our lessons learned for turnover to the next survey team. The other themes contained in these comment responses were as follows:

- NAYGN should focus more on Public Information and outreach, as well as networking for NAYGN members
- NAYGN should offer more online content
- The nuclear industry should increase eligibility for alternate work arrangement programs and promote employee participation

Examples of comments addressing these themes:

"...NAYGN has been an extremely helpful in helping me gain invaluable information and experience thru webinars and contacts within the industry."

"... Some members aren't able to attend conferences or attend meetings at specific times, so online information being available would be beneficial."

"NAYGN is an excellent leadership development tool, and an effective means by which new employees can jump-start their nuclear industry knowledge and involvement..."

XI. Conclusions and Recommendations

The 2014 NAYGN Career Survey again collected a large amount of data that uncovered trends in the areas of salary, job satisfaction, and NAYGN satisfaction. Due to the consistency between the 2014 and 2012 surveys, changes in trends over the past two years were able to be easily identified. It is evident that industry events between 2012 and 2014 have had a measureable impact on the young generation's feeling towards the industry.

Conclusions

1. Job satisfaction remains strong but dynamics have shifted

A slight decrease in overall job satisfaction was reported by the young generation but remains extremely positive. Five out of six members are satisfied or very satisfied; over one fifth are very satisfied. In 2014, slightly more members are searching for new jobs (both within and outside of the industry) than in 2012. In 2014, two thirds of respondents are not actively seeking new employment opportunities.

In 2012 there was a clear correlation between job satisfaction and seeking employment – satisfied members were not seeking a new job while dissatisfied ones were. In 2014, this correlation was once again evident.

2. Compared to 2012, the young generation is working more hours and compensation has decreased. (Inflation was not accounted for when calculating salary change.)

Current base salary increased just 2% from 2012; however the average total salary (base plus overtime, bonuses, incentives etc.) decreased 4%. The mid-level of the young generation (3-10 years of experience) experienced the brunt of the decrease. In that same time span, average weekly working hours increased across the board.

Salary and salary growth is ranked one of the top three factors influencing the job satisfaction of the young generation - level of satisfaction within this area decreased from 2012.

3. Work life balance remains important to the young generation, but satisfaction has decreased

Work life balance continues to be ranked one of the top three factors influencing the job satisfaction of the young generation. From 2012, less members participate (and are eligible for) alternative work arrangement programs.

4. Knowledge Transfer and Retention remains a challenge for the industry.

Members are unclear about the direction of Knowledge Transfer and Retention. Though programs are being developed, the young generation is concern that companies are not acting quickly enough to make a difference.

5. Satisfaction with NAYGN remains strong – members satisfied with NAYGN are more satisfied with their jobs and less likely to seek new employment

Recommendations

The recommendations below are based on the survey team's analysis and interpretation of this data.

For NAYGN

- Continue to engage and inform the public about the benefits of nuclear science and technology.
- Enhance NAYGN's "virtual" offerings so that more members can benefit other than just the ones who are able to attend conferences.
- Members with internship experience had an average starting salary 11% higher than those without an internship. NAYGN should communicate this statistic to college students as part of the recruitment and retention campaign.
- Engineers make up the majority of NAYGN members the organization should compare membership demographics with the rest of the industry and initiate targeted recruitment efforts if needed.

For the Industry

- Nuclear industry leadership should keep young professionals abreast of their plans to overcome the challenges currently facing all of us. Young professionals are eager to back this industry, but only if it appears that our leaders are fully committed to the growth and success of nuclear science and technology in North America and abroad.
- Work life balance is very important to the young generation, but eligibility for alternative work arrangements has declined. Increase eligibility and encourage participation in programs to boost satisfaction in this area.
- Salary growth & growth potential is a strong motivator for the young generation, but satisfaction in this area has declined since 2012. Connect and communicate with the young generation on this topic and identify ways to boost satisfaction in this area. Opportunities for job rotations, challenging work, special assignments, and advancements should be made available to the young generation to retain employees and increase job satisfaction.
- Nuclear companies should ensure that young professionals are given adequate on-the-job experience with seasoned employees, even given the temporary effect of increased cost/headcount.
- Continue to support NAYGN. There is a correlation between employee retention and respondent's satisfaction with NAYGN.

XII. Acknowledgments

The Benchmarking Committee would like to thank the NAYGN Core for their support throughout this project. Continual support and feedback was provided by two core members who participated as Benchmarking Committee members on the project. The Core provided timely review and feedback during report development. Our team appreciates the communications support we received with notifications to all NAYGN members as well as chapter lead briefs.

Thank you to the NAYGN members for responding to the survey. Your input is valuable and has helped us form the voice of the young generation in nuclear through the data and this report. We are delighted to report that PSEG Hope Creek and Salem Chapter had over 50% of their chapter participate in the career survey. Congratulations to your chapter on winning the highest participation award. And thank you to all for your participation!

Finally, we'd like to thank the volunteers who tirelessly participated on the Benchmarking Committee. You have worked together for seven months to make this report a success. Your time spent on team calls and providing feedback is to be commended. It is always a challenge to participate on a virtual, allvolunteer project team while juggling daily work and family responsibilities. It is encouraging to see several committee members agree – even if it was reluctantly at times – to step into leadership roles and perform professionally and with high standards. Many thanks to the committee for your support!

Appendix A: Survey Questions

NAYGN Career Survey
Thanks for participating in the NAYGN Career Survey. The results collected herein will be summarized in a report published later in the year. All
responses are kept anonymous.
\star 1. Are you over or under 35 years of age?
Over 35 years of age
O Under 35 years of age
2. Gender:
\bigstar 3. Total years of full-time work experience in: (integers only, enter 0 for less than 1 year)
Current Company
*4. What is the highest level of school you have completed or the highest degree you
have received?
U High School
O 2 Year Diploma
O Graduate Degree
$m{\star}$ 5. Did you have a student development position prior to starting full-time work (i.e.
internship, co-op, etc.)?
O No
Yes, outside of the nuclear industry
O Yes, inside the nuclear industry
O Yes, at the company I currently work for

NATGN Career Survey
*6. What level in the organization are you?
O Intern/Co-op
O Entry Level: Usually requires ordinary level of education, training, and experience qualifications.
O Individual Contributor (non-supervisory employee): Experienced employee who is responsible for leading more complex projects and tasks.
O Senior Employee (non-supervisory employee): Employee who has acquired extensive knowledge of concepts, principles and practices, and works independently with only general direction.
O Supervisor: Responsible for the direct supervision of one or more employees.
st7. What category best describes the company you currently work for?
Nuclear Vendor
O Nuclear Utility
Government Organization/Laboratory
Academic Organization
O Industry Group (INPO, NEI, EPRI, ANS, CNA, CNS etc.)
Other
*8. What best describes your current job function?
Science (health physics, radiation protection, etc.)
O Business Planning/Project Management
Business Planning/Project Management Maintenance/Technical
Business Planning/Project Management Maintenance/Technical Security
Business Planning/Project Management Maintenance/Technical Security Learning/Training
Business Planning/Project Management Maintenance/Technical Security Learning/Training Administrative/Non-technical
Business Planning/Project Management Maintenance/Technical Security Learning/Training Administrative/Non-technical HR/Communications
Business Planning/Project Management Maintenance/Technical Security Learning/Training Administrative/Non-technical HR/Communications
Business Planning/Project Management Maintenance/Technical Security Learning/Training Administrative/Non-technical HR/Communications
Business Planning/Project Management Maintenance/Technical Security Learning/Training Administrative/Non-technical HR/Communications
Business Planning/Project Management Maintenance/Technical Security Learning/Training Administrative/Non-technical HR/Communications
Business Planning/Project Management Maintenance/Technical Security Learning/Training Administrative/Non-technical HR/Communications
Business Planning/Project Management Maintenance/Technical Security Learning/Training Administrative/Non-technical HR/Communications



O Electrical

O Mechanical

 \bigcirc Other

f * 10. What kind operations position do you work in?

st11. What North American country do you wo	'k in?
---	--------

O Canada

O USA

*12. Please answer these questions in US Dollars (USD), integers only. All answers are strictly confidential.

Starting annual base salary in nuclear industry

Current annual base salary

Current annual added pay (overtime, bonuses, etc.)

*13. Please answer these questions in Canadian Dollars (CAD), integers only. All answers are strictly confidential.

Starting annual base salary in nuclear industry

Current annual base salary

Current annual added pay (overtime, bonuses, etc.)

ł

*14. Please answer these questions in Mexican Pesos (MXN), integers only. All answers are strictly confidential.

Starting annual base salary in nuclear industry

Current annual base salary

Current annual added pay (overtime, bonuses, etc.)

*15. How long did you work at your current job until you received your first increase in pay that was not based on cost of living adjustments?

O N/A			
\bigcirc 0 – 6 months			
\bigcirc 7 – 12 months			
0 1 - 2 years			
\bigcirc 2 – 3 years			
O 3+ years			
×16. How long did you	work af your curre	nt job until vou received v	your first significant
increase in responsibili	itv?	in job until you received j	your mist significant
\bigcirc 0 – 6 months			
\bigcirc 7 – 12 months			
1 – 2 years			
2 - 3 years			
O 3+ years			
- *47 Which of the follo			
TTT. Which of the follo	wing (if any) alterna lo vou participate in	ative work arrangement p	orograms are you
engible for and which u	I'm not eligible	l i I'm eligible	Inarticipate
9/80 - working 80 hours o∨er 9 days (instead of 10)	O	O	O
4/10 - working 4 10 hour days in a week (instead of 5 8 hour days)	0	0	0
Part-time Employment	0	0	0
Telecommuting	Ō	Ō	Ō
Flex Hours	0	0	0

*18. How many hours do you work in an average week?

O <35

- O 35 40
- O 40 45
- 0 45 50
- 0 50 55
- 0 55 60

O >60

Image: mode in the mode in the section of the following to your job satisfied in the section of the sectin of the section of the section of the section of the section of	I'm satisfied				
An very dissatisfied An very dissatisfied in 1'd consider quitting if I was into rinfuence in this area dissatisfied in this area my job satisfaction Advancement/Growth Colleagues Advancement/Growth Constrained Advancement/Growth Constrained Advancement/Growth Constrained Advancement/Growth Constrained Constrain	I'm dissatisfied				
Idequitif was disatisfied in Ideonsider quitting if I was This has minor influence in this area disatisfied in this area Ident care about this is the minor influence in my job satisfied in this area disatisfied in this area Ident care about this is the minor influence in my job satisfied in this area Work/Life Balance Ident care about the influence Ident care about the influence Ident care about the influence Salary & Salary Growth Ident care about the influence Ident care about the influence Ident care about the influence Corporate Culture Ident care about the influence Ident care about the influence Ident care about the influence Cataleon Ident care about the influence Cataleon (Influence Ident care about the influence Cataleon (Influence Image:	O I'm ∨ery dissatisfied				
Idia qui fi I vas dissatisfiei in I idia consider quitting if I vas dissatisfiei in this area This has minor influence in my job satisfaction Onto care about this area Work/Life Balance O <td< th=""><th>*20. How important</th><th>is each of the fo</th><th>llowing to your jo</th><th>b satisfaction?</th><th></th></td<>	*20. How important	is each of the fo	llowing to your jo	b satisfaction?	
Work/Life Balance O O O Colleagues O O O Salary & Salary Growth O O O Benefits (health care, etc.) O O O Corporate Culture O O O O Location O O O O O Training Opportunities & Mentoring O <th>l'd q</th> <th>uit if I was dissatisfied in</th> <th>I'd consider quitting if I was</th> <th>This has minor influence in</th> <th>I don't care about this a</th>	l'd q	uit if I was dissatisfied in	I'd consider quitting if I was	This has minor influence in	I don't care about this a
Colleagues O O O Salary & Salary Growth O O O Benefits (health care, etc.) O O O Corporate Culture O O O O Location O O O O O Training Opportunities & Mentoring O O O O O Challenging Work O <td>Work/Life Balance</td> <td></td> <td></td> <td></td> <td>0</td>	Work/Life Balance				0
Salary & Salary Growth O O O Benefits (health care, etc.) O O O Corporate Culture O O O O Location O O O O O Training Opportunities & O	Colleagues	ŏ	ŏ	ŏ	ŏ
Benefits (health care, etc.) O	Salary & Salary Growth	Ŏ	ŏ	Ŏ	Ŏ
Corporate Culture O	Benefits (health care, etc.)	Ŏ	Ŏ	Ŏ	Ŏ
Location O<	Corporate Culture	Ō	Ō	Õ	Ō
Training Opportunities & Mentoring O O O O Challenging Work O	Location	0	0	0	0
Challenging Work O O O O Advancement/Growth O O O O Opportunities I'm very satisfied I'm satisfied I'm dissatisfied I'm very dissatisfied Vork/Life Balance O O O O Colleagues O O O O Salary & Salary Growth O O O O Benefits (health care, etc.) O O O O Corporate Culture O O O O Location O O O O O Training Opportunities & Mentoring O O O O Challenging Work O O O O Advancement/Growth O O O O Advancement/Growth O O O O	Training Opportunities & Mentoring	0	0	0	0
Advancement/Growth Opportunities O O O *21. How satisfied are you with each of the following in your current job? I'm very satisfied I'm very dissatisfied I'm very dissatisfied I'm very satisfied I'm satisfied I'm dissatisfied I'm very dissatisfied I'm very dissatisfied Vork/Life Balance O	Challenging Work	0	0	0	0
*21. How satisfied are yout with each of the following uncurrent yout current yout with each of the satisfied I'm very satisfied I'm very dissatisfied I'm very dissatisfied Vork/Life Balance O	Advancement/Growth Opportunities	0	0	0	0
I'm very satisfied I'm satisfied I'm dissatisfied I'm very dissatisfied Work/Life Balance O O O O Colleagues O O O O Salary & Salary Growth O O O O Benefits (health care, etc.) O O O O Corporate Culture O O O O Location O O O O Training Opportunities & Mentoring O O O Challenging Work O O O Advancement/Growth Opportunities O O O	*21. How satisfied a	are you with eac	h of the following	in your current jol	0?
VorkUlfe Balance O O O O O Colleagues O O O O O O Salary & Salary Growth O O O O O O O Benefits (health care, etc.) O <td< td=""><td></td><td>I'm very satisfied</td><td>I'm satisfied</td><td>I'm dissatisfied</td><td>I'm very dissatisfied</td></td<>		I'm very satisfied	I'm satisfied	I'm dissatisfied	I'm very dissatisfied
Salary & Salary Growth O O O O Salary & Salary Growth O O O O Benefits (health care, etc.) O O O O Corporate Culture O O O O Location O O O O Training Opportunities & Mentoring O O O O Challenging Work O O O O O Advancement/Growth Opportunities O O O O O O		Ö	Ö	0	<u> </u>
Benefits (health care, etc.) O O O Corporate Culture O O O Location O O O Training Opportunities & Mentoring O O O Challenging Work O O O Advancement/Growth Opportunities O O O	Salary & Salary Growth	0	Ö	Ö	Ö
Corporate Culture O O O O Location O O O O Training Opportunities & Mentoring O O O O Challenging Work O O O O Advancement/Growth Opportunities O O O O	Benefits (health care etc.)	ŏ	X	Ŏ	Ŏ
Location O O O O Training Opportunities & O O O O Mentoring Work O O O O O Advancement/Growth Opportunities	Corporate Culture	Ŏ	Ŏ	ŏ	Ŏ
Training Opportunities & O O O Mentoring O O O Challenging Work O O O Advancement/Growth Opportunities O O O	Location	ŏ	ŏ	ŏ	ŏ
Challenging Work O O O O Advancement/Growth Opportunities O	Training Opportunities & Mentoring	ŏ	ŏ	ŏ	ŏ
Advancement/Growth Opportunities	Challenging Work	0	0	0	0
	Advancement/Growth Opportunities	Ō	Õ	Õ	Ō

*****22. Are you actively looking for a new job?

- O Yes, outside and inside of the nuclear industry
- igodown Yes, outside of the nuclear industry
- O Yes, outside of my company but still within the nuclear industry
- O Yes, inside of my company



AYG N Career Su	rvey		
*23. How soon would	d you like to change	jobs?	
\bigcirc 0 – 3 months			
\bigcirc 3 – 6 months			
\bigcirc 6 – 9 months			
9 – 12 months			
*24 What about you	r current ich is prom	nting you to look for a ne	wich?
- 24. What about you	Big influence	Some influence	No influence
Work/Life Balance	0	0	0
Colleagues	0	0	0
Salary & Salary Growth	0	0	0
Benefits (health care, etc.)	0	0	0
Corporate Culture	0	0	0
Location	Q	Q	Q
Training Opportunities & Mentoring	0	0	0
Challenging Work	0	0	0
Advancement/Growth	0	0	0

25. What other careers interest you in the nuclear industry? (select all that apply)
Science (health physics, radiation protection, etc.)
Engineering
Operations
Business Planning/Project Management
Maintenance/Technical
Security
Learning/Training
Administrative/Non-technical
HR/Communications
st26. In 5 years, do you still see yourself working in the nuclear industry?
O Yes
Maybe
O №
*27. Are you willing to relocate outside of your local area (geographically)?
O Yes
Ŏ №
*28. Would you recommend a career in the nuclear industry to a family member or peer?
O Yes
O №
\sim 29. Would you recommend a career in your company to a family member or peer?
Q Yes
Ŭ №
30. What is your outlook on the future of careers in the nuclear industry?

*31. Do you have a knowledge transfer and retention program in your company?

0	No

O Yes

O Yes, but I do not participate

O My company is developing a knowledge transfer and retention program

*32. Please review the listed Knowledge Transfer & Retention (KT&R) components to indicate the components that are part of your company's KT&R program (if applicable). For each KT&R component that you use, please indicate whether or not you think it is effective.

	Effective part of my	Ineffective part of my	I do not participate in this part of my program	This is not part of my	Unsure if this is part of
Critical Knowledge Risk Assessments	O	O	O	O	O
Expert Contact List	0	0	0	0	0
Expert Storytelling Session	0	0	0	0	0
Industry Conferences	0	0	0	0	0
Job Cross- training/Rotational	0	0	0	0	0
Assignments	0	0	0	0	0
Job Shadowing	0	0	0	0	0
Job Turnover	0	0	0	0	0
Professional Communities (NAYGN, WIN, ANS, etc.)	0	0	0	0	0
Knowledge Database	0	0	0	0	0
Procedures	0	0	0	0	0
Formal Mentoring	0	0	0	0	0
Informal Mentoring	0	0	0	0	0
Technical Mentoring	0	0	0	0	0
Succession Planning	0	0	0	0	0
Technical Training	0	0	0	0	0

*33. Is your local NAYGN chapter a component of your KT&R program?

O No, but my local chapter participates in an unoffical capacity

*34. Have you been negatively impacted by loss of knowledge or subject-matter experts in your company?

- O Yes
- O No

O No, but I expect to be impacted in the future

O Yes O №

*35. Do you feel your company is headed in the right direction in developing an effective Knowledge Transfer and Retention program?

O Yes

O No

O I am unsure about the direction of my company's KT&R program.

36. Please provide any additional insights about your Knowledge Transfer and Retention program in the space below.



NAYGN	Career	Survey

★37. What is imµ	portant for NAYGN to	o provide to its m	embers?	
	This is very important to me	This is important to me	This is not important to me	This is really not important to me
Leadership skill de∨elopment	0	0	0	Õ
Soft skill de∨elopment (communication, public speaking, etc.)	0	0	0	0
Public outreach opportunities	0	0	0	0
Networking	0	0	0	0
Interaction with industry executives	0	0	0	0
*38. How satisf	ied have you been w	vith what NAYGN	has provided to yo	u?
Leadership skill development				
Soft skill development (communication, public speaking, etc.)	0	0	0	0
Public outreach opportunities	0	0	0	0
Networking	0	0	0	0
Interaction with industry executives	0	0	0	0
*39. The length	of this survey was:			
Just right				
10. Please provid	e vour feedback or (comments on an	v of the tonics addr	assad in this
survev.	e your recubuok or		y of the toplos add	
		À		



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