# Salary Information for Nuclear Engineers and Health Physicists, July 1996

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## INTRODUCTION

Salary information was collected for July1996 for personnel working as nuclear engineers and health physicists. The salary information includes personnel at the B.S., M.S., and Ph.D. levels with zero, one, three, four to seven, and eight to ten years of professional work experience.

Information is provided for utilities and non-utilities. Non-utilities include private sector organizations and U.S. Department of Energy contractor-operated facilities. Government agencies, the military, academic organizations, and medical facilities are excluded. In previous years the salary data have been collected for October. In 1996, the data were collected for July; thus, some caution must be exercised in making annual salary trend comparisons.

The number of requests for information and of responses received are summarized in Table 1.

***Table 1. Salary Information Requests and Responses, July 1996***

| | # Requests | # Responses | % Responded |
|---|---|---|---|
| Utilities: | 49 | 22 | 45% |
| Non-Utilities*: | 152 | 66 | 43% |
| | 201 | 88 | 44% |

* Includes one refusal in the number of responses.

## SUMMARY HIGHLIGHTS -- JULY 1996 SALARY INFORMATION

### Salaries for Nuclear Engineers (see Table 2 and 3)

**Nuclear engineers' starting salaries reported by utilities and non-utilities**

For B.S. level with zero years of professional work experience, the average annual salary is $37,100 for utilities and $36,700 for non-utilities.

For M.S. level with zero years of professional work experience, the average annual salary is $38,800 for utilities and $40,100 for non-utilities.

For Ph.D. level with zero years of professional work experience, the average annual salary is $41,500 for utilities and $49,100 for non-utilities.

**Nuclear engineers' salary comparisons between utilities and non-utilities**

Utilities in comparison to non-utilities tend to pay relatively more for B.S. level personnel and have larger salary differentials for years of experience within degree levels.

Non-utilities in comparison to utilities tend to pay relatively more for M.S. and Ph.D. level personnel and have larger salary differentials between degree levels for equal years of experience.

### Salaries for Health Physicists (see Tables 2 and 3)

**Health physicists' starting salaries reported by utilities and non-utilities**

For B.S. degree with zero years of professional work experience, the average annual salary is $39,400 for utilities and $34,500 for non-utilities.

For M.S. degree with zero years of professional work experience, the average annual salary is $41,700 for utilities and $39,500 for non-utilities.

For Ph.D. degree with zero years of professional work experience, the average annual salary is $44,700 for utilities and $48,300 for non-utilities.

**Health physicists' salary comparisons between utilities and non-utilities**

Utilities in comparison to non-utilities tend to pay relatively more for B.S. and M.S. level personnel.

Non-utilities in comparison to utilities tend to pay relatively more for Ph.D. level personnel, and have larger salary differences both for years of experience within degree levels and for degree levels for equal years of experience.

### Percentage Change Trends for Salaries, 1992-1996 (see Table 4)

[These changes are for organizations that provided data in each pair of years being compared.]

The percentage increases in average starting salaries from 1995 to 1996, for both nuclear engineers and health physicists, are slightly higher than, or equal to, the annual increases recorded for 1994 to 1995 for all but B.S. level health physicists.

For B.S. and M.S. nuclear engineers the 1995 to 1996 salary changes are about the average of the annual changes that occurred between 1992 and 1995.

Ph.D. nuclear engineers had the highest percentage increase from 1995 to 1996 reported over the last 4 years.

The percentage change in health physicists' starting salaries from 1995 to 1996, for all degree levels, are lower (often considerably lower) than the annual increases reported between 1992 and 1994.

## *Table 2. Utilities Salary Information*
## July 1996

### NUCLEAR ENGINEERS

| | Annual Salary (rounded to nearest hundred) | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | B.S. Degree Level Personnel | | | | | M.S. Degree Level Personnel | | | | | Ph.D. Degree Level Personnel | | | | |
| Years of Experience: | 0 Years | 1 Year | 3 Years | 4-7 Yrs | 8-10 Yrs | 0 Years | 1 Year | 3 Years | 4-7 Yrs | 8-10 Yrs | 0 Years | 1 Year | 3 Years | 4-7 Yrs | 8-10 Yrs |
| total received: | 20 | 17 | 18 | 12 | 12 | 14 | 14 | 13 | 7 | 7 | 8 | 8 | 8 | 4 | 5 |
| Average (Mean): | $37,100 | $39,000 | $44,900 | $53,300 | $61,700 | $38,800 | $40,100 | $43,900 | $50,300 | $59,300 | $41,500 | $43,100 | $45,000 | $49,300 | $66,600 |
| Median: | $37,100 | $38,400 | $44,200 | $53,300 | $61,800 | $39,300 | $40,100 | $44,700 | $51,000 | $63,100 | $41,200 | $42,800 | $44,800 | $49,300 | $62,600 |
| Standard Deviation: | $2,500 | $3,100 | $5,700 | $6,100 | $8,400 | $2,900 | $2,600 | $2,500 | $4,200 | $8,100 | $4,100 | $4,400 | $5,400 | $5,100 | $22,700 |
| High: | $41,000 | $45,700 | $61,200 | $61,100 | $74,500 | $42,300 | $43,900 | $48,000 | $56,100 | $71,200 | $47,100 | $48,500 | $52,100 | $54,800 | $105,500 |
| Low: | $31,600 | $33,800 | $38,200 | $42,600 | $48,100 | $33,800 | $36,100 | $39,700 | $43,500 | $49,000 | $36,200 | $36,200 | $36,200 | $43,900 | $49,500 |



### HEALTH PHYSICISTS

| | Annual Salary (rounded to nearest hundred) | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | B.S. Degree Level Personnel | | | | | M.S. Degree Level Personnel | | | | | Ph.D. Degree Level Personnel | | | | |
| Years of Experience: | 0 Years | 1 Year | 3 Years | 4-7 Yrs | 8-10 Yrs | 0 Years | 1 Year | 3 Years | 4-7 Yrs | 8-10 Yrs | 0 Years | 1 Year | 3 Years | 4-7 Yrs | 8-10 Yrs |
| total received: | 13 | 12 | 13 | 6 | 6 | 10 | 9 | 11 | 3 | 3 | 9 | 9 | 9 | 2 | 2 |
| Average (Mean): | $39,400 | $41,500 | $48,600 | $54,500 | $60,400 | $41,700 | $44,300 | $49,100 | $51,200 | $51,800 | $44,700 | $46,900 | $50,300 | $50,700 | $55,300 |
| Median: | $37,900 | $39,600 | $48,500 | $52,900 | $61,100 | $40,700 | $42,600 | $45,400 | $52,700 | $49,000 | $44,800 | $46,200 | $50,000 | $50,700 | $55,300 |
| Standard Deviation: | $5,300 | $6,000 | $8,200 | $11,400 | $11,800 | $5,000 | $5,800 | $8,900 | $4,500 | $6,300 | $4,800 | $5,600 | $7,900 | $5,700 | $8,100 |
| High: | $47,100 | $50,400 | $61,900 | $74,000 | $76,900 | $49,300 | $52,700 | $66,200 | $54,800 | $59,000 | $51,400 | $55,000 | $62,100 | $54,700 | $61,000 |
| Low: | $31,400 | $32,700 | $38,000 | $42,600 | $47,300 | $35,600 | $37,900 | $37,900 | $46,200 | $47,300 | $37,900 | $37,900 | $37,900 | $46,600 | $49,500 |

## *Table 3. Non-Utilities Salary Information*
## July 1996

### NUCLEAR ENGINEERS

| | Annual Salary (rounded to nearest hundred) | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | B.S. Degree Level Personnel | | | | | M.S. Degree Level Personnel | | | | | Ph.D. Degree Level Personnel | | | | |
| Years of Experience: | 0 Years | 1 Year | 3 Years | 4-7 Yrs | 8-10 Yrs | 0 Years | 1 Year | 3 Years | 4-7 Yrs | 8-10 Yrs | 0 Years | 1 Year | 3 Years | 4-7 Yrs | 8-10 Yrs |
| total received: | 33 | 35 | 39 | 32 | 32 | 29 | 28 | 31 | 24 | 25 | 23 | 21 | 25 | 19 | 20 |
| Average (Mean): | $36,700 | $38,600 | $43,000 | $47,000 | $57,300 | $40,100 | $42,400 | $46,200 | $52,000 | $61,800 | $49,100 | $50,800 | $55,400 | $61,000 | $69,300 |
| Median: | $36,100 | $37,600 | $41,300 | $45,600 | $54,400 | $40,400 | $42,000 | $45,800 | $50,400 | $58,000 | $51,400 | $52,000 | $55,200 | $59,000 | $70,000 |
| Standard Deviation: | $7,500 | $8,900 | $12,000 | $4,400 | $9,900 | $4,000 | $4,300 | $4,800 | $4,300 | $10,400 | $6,500 | $6,600 | $7,600 | $7,000 | $8,500 |
| High: | $72,800 | $83,200 | $110,200 | $60,800 | $92,700 | $50,400 | $52,300 | $60,000 | $60,000 | $92,000 | $60,200 | $63,100 | $70,000 | $76,200 | $89,000 |
| Low: | $27,000 | $28,800 | $30,900 | $38,000 | $46,800 | $32,000 | $34,000 | $36,000 | $45,000 | $49,200 | $41,200 | $43,000 | $44,800 | $52,800 | $55,200 |



### HEALTH PHYSICISTS

| | Annual Salary (rounded to nearest hundred) | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | B.S. Degree Level Personnel | | | | | M.S. Degree Level Personnel | | | | | Ph.D. Degree Level Personnel | | | | |
| Years of Experience: | 0 Years | 1 Year | 3 Years | 4-7 Yrs | 8-10 Yrs | 0 Years | 1 Year | 3 Years | 4-7 Yrs | 8-10 Yrs | 0 Years | 1 Year | 3 Years | 4-7 Yrs | 8-10 Yrs |
| total received: | 28 | 32 | 32 | 33 | 30 | 24 | 26 | 25 | 23 | 24 | 18 | 19 | 20 | 17 | 20 |
| Average (Mean): | $34,500 | $36,600 | $41,200 | $46,500 | $53,400 | $39,500 | $40,900 | $45,000 | $51,000 | $59,900 | $48,300 | $49,600 | $55,000 | $61,000 | $67,400 |
| Median: | $35,900 | $37,100 | $40,300 | $47,000 | $54,000 | $39,700 | $40,700 | $45,500 | $50,700 | $59,900 | $46,800 | $47,800 | $52,100 | $63,000 | $70,000 |
| Standard Deviation: | $5,700 | $8,100 | $9,200 | $5,500 | $5,600 | $4,400 | $4,400 | $5,400 | $5,100 | $9,900 | $6,700 | $6,900 | $6,800 | $7,500 | $9,200 |
| High: | $52,000 | $72,800 | $83,200 | $58,100 | $65,800 | $50,400 | $51,600 | $55,600 | $58,800 | $98,000 | $60,200 | $63,100 | $68,900 | $76,200 | $86,300 |
| Low: | $22,000 | $24,000 | $30,000 | $31,000 | $43,100 | $29,900 | $32,400 | $33,400 | $41,400 | $48,000 | $40,300 | $40,000 | $45,800 | $49,500 | $53,000 |

## *Table 4. Annual Salary Percentage Changes, 1992 - 1996*

**For Personnel with Zero Years of Experience**

**The annual percentage changes are for organizations providing salary data for both years in each column.**

**FOR ALL ORGANIZATIONS (utilities plus non-utilities)**

| | B.S. Level Personnel (For zero years of experience) | | | |
|---|---|---|---|---|
| | 1995 to 1996 | 1994 to 1995 | 1993 to 1994 | 1992 to 1993 |
| **Nuclear Engineers** | | | | |
| Total Number of Organizations: | 43 | 31 | 26 | 25 |
| Average Percent Change in Salary: | 2.1% | 1.6% | 2.5% | 1.8% |
| **Health Physicists** | | | | |
| Total Number of Organizations: | 35 | 25 | 21 | 17 |
| Average Percent Change in Salary: | 2.1% | 2.4% | 4.5% | 2.5% |

| | M.S. Level Personnel (For zero years of experience) | | | |
|---|---|---|---|---|
| | 1995 to 1996 | 1994 to 1995 | 1993 to 1994 | 1992 to 1993 |
| **Nuclear Engineers** | | | | |
| Total Number of Organizations: | 33 | 26 | 20 | 19 |
| Average Percent Change in Salary: | 2.2% | 2.1% | 2.6% | 1.9% |
| **Health Physicists** | | | | |
| Total Number of Organizations: | 27 | 21 | 18 | 16 |
| Average Percent Change in Salary: | 2.4% | 2.4% | 3.5% | 2.5% |

| | Ph.D. Level Personnel (For zero years of experience) | | | |
|---|---|---|---|---|
| | 1995 to 1996 | 1994 to 1995 | 1993 to 1994 | 1992 to 1993 |
| **Nuclear Engineers** | | | | |
| Total Number of Organizations: | 23 | 19 | 11 | 12 |
| Average Percent Change in Salary: | 2.9% | 2.1% | 2.5% | 1.0% |
| **Health Physicists** | | | | |
| Total Number of Organizations: | 20 | 17 | 12 | 11 |
| Average Percent Change in Salary: | 2.2% | 1.9% | 5.2% | 3.7% |

# FIGURES

**Figure 1. Nuclear Engineers' Salaries at Utilities, July 1996**

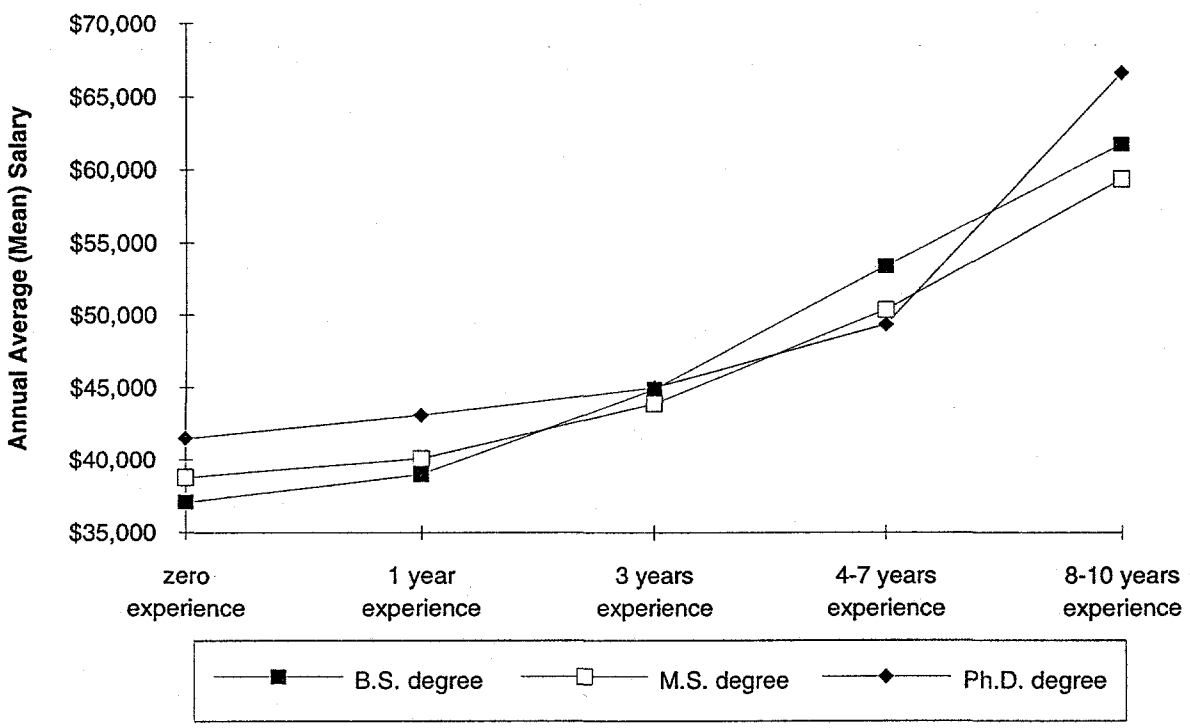


**Figure 2. Nuclear Engineers' Salaries at Non-Utilities, July 1996**

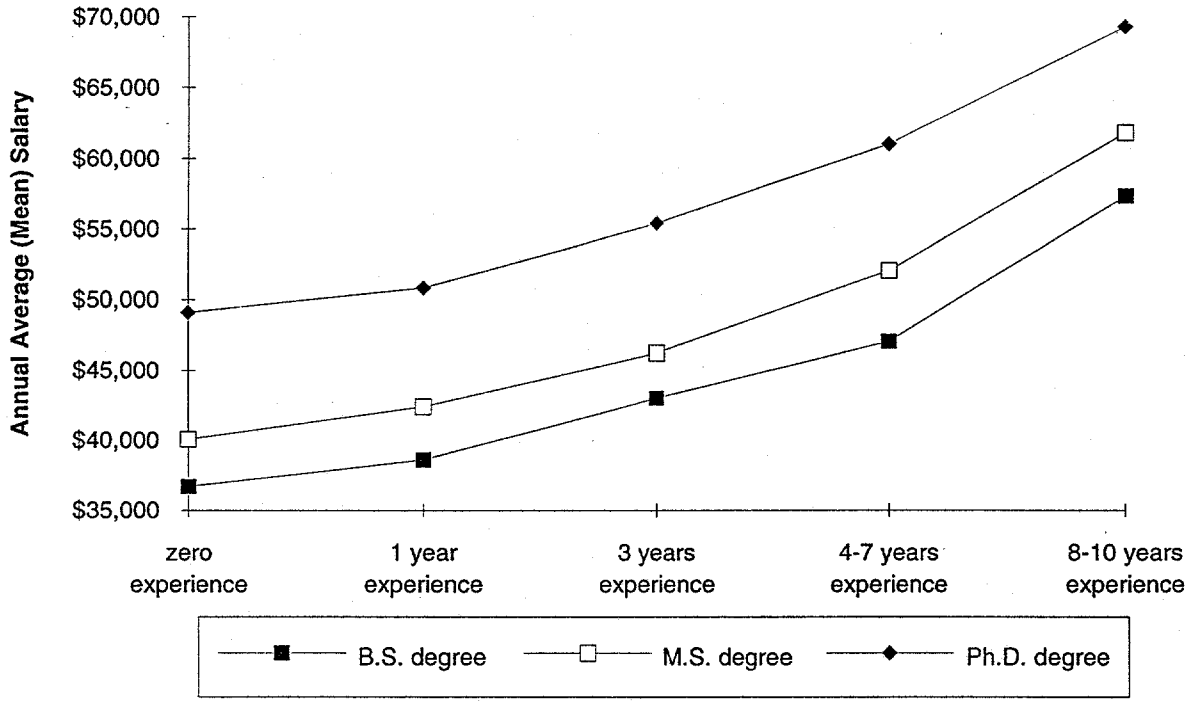


**Figure 3. Health Physicists' Salaries at Utilities, July 1996**

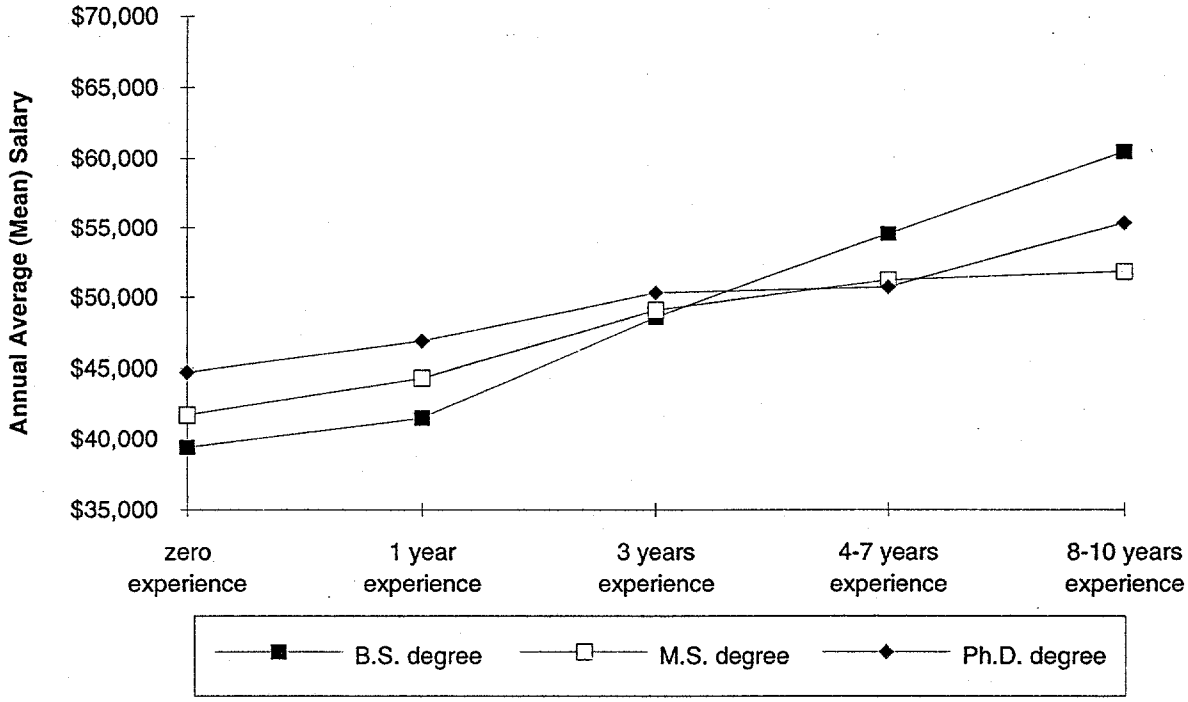


**Figure 4. Health Physicists' Salaries at Non-Utilities, July 1996**

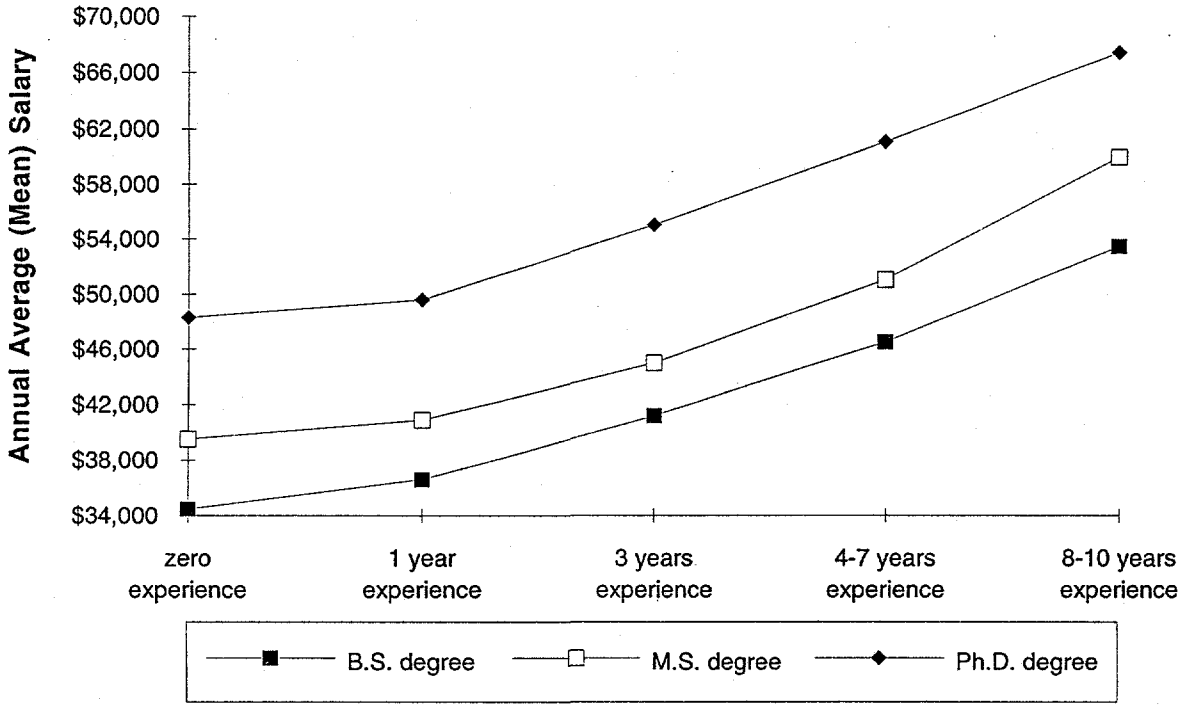
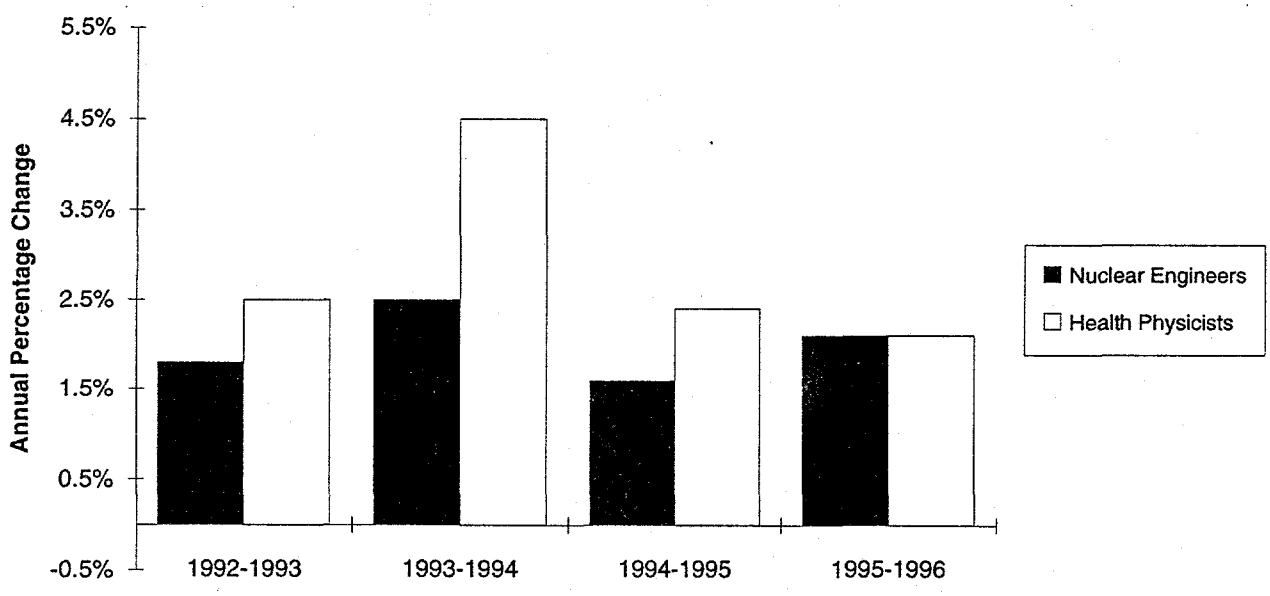
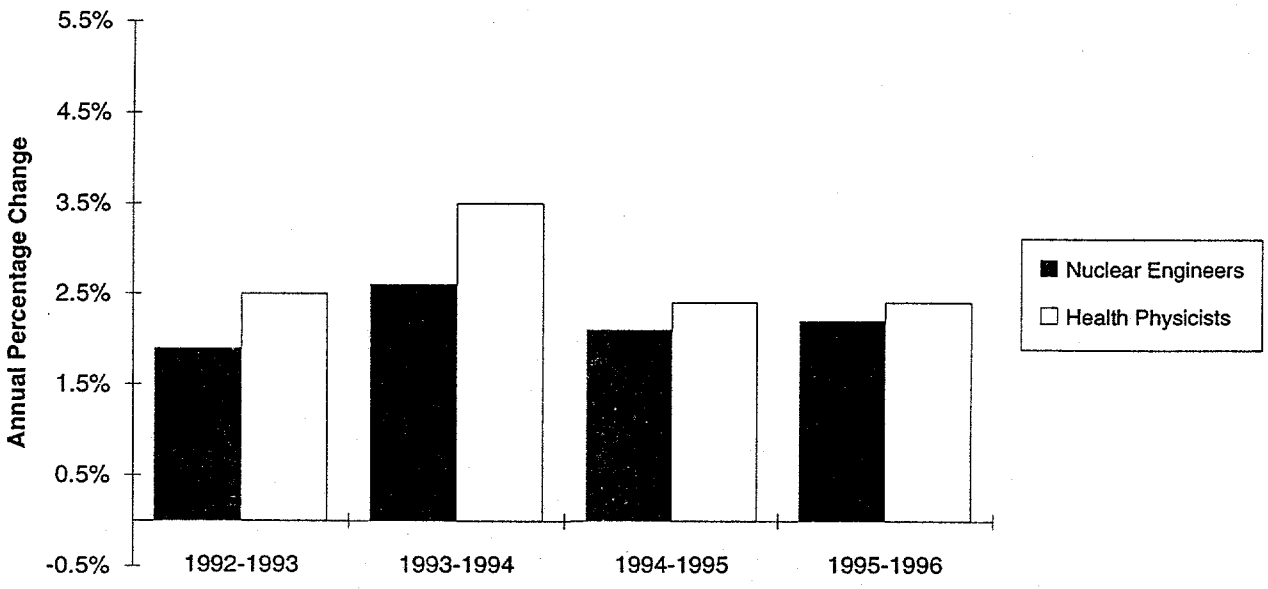


**Figure 5. B.S. Level Personnel, Zero Years Experience, Annual Salary Changes, All Organizations (Utilities and Non-Utilities)**



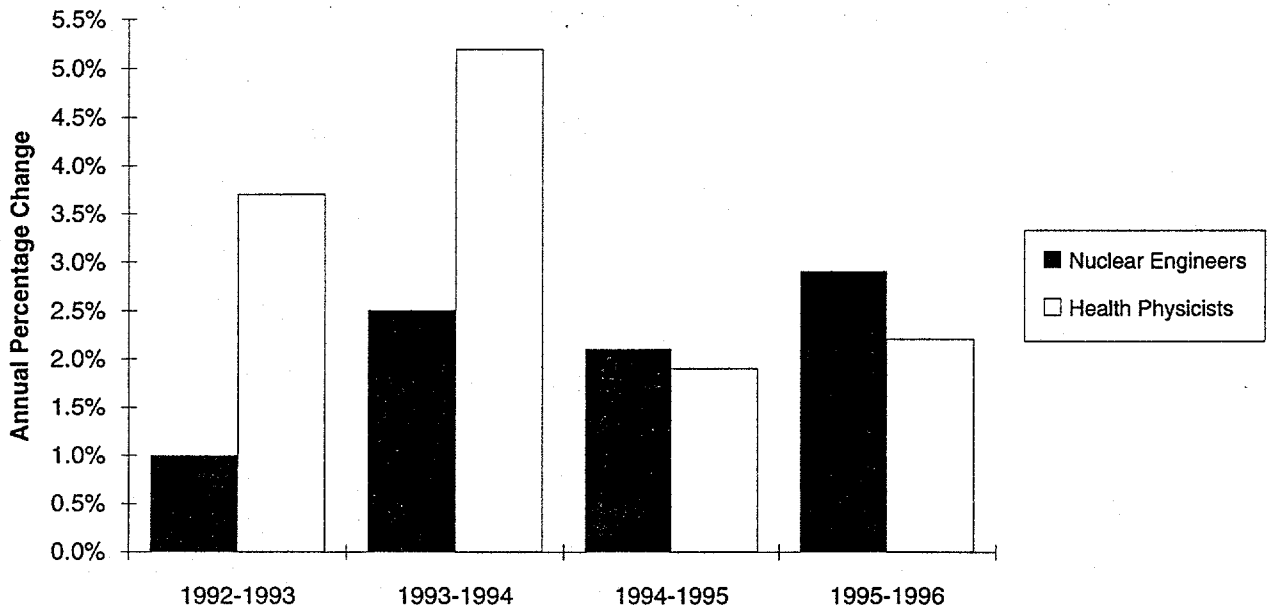

**(For Organizations that Provided Data in Both Years Indicated)**

**Figure 6. M.S. Level Personnel, Zero Years Experience, Annual Salary Changes, All Organizations (Utilities and Non-Utilities)**




**(For Organizations that Provided Data in Both Years Indicated)**

**Figure 7. Ph.D. Level Personnel, Zero Years Experience, Annual Salary Changes, All Organizations (Utilities and Non-Utilities)**




**(For Organizations that Provided Data in Both Years Indicated)**

# SURVEY RESPONDENTS

(Organizations that authorized listing of company name.)

## Utilities

Arizona Public Service
Centerior Energy Corporation
ComEd
Consolidated Edison Company of New York
Consumers Power Company
Duke Power Company
Duquesne Light Company
Entergy Services, Inc.
Florida Power Corporation
Houston Lighting and Power Company
Maine Yankee Atomic Power Company
Omaha Public Power District
PECO Energy Company
Tennessee Valley Authority
Texas Utilities Electric Company
The Southern Company
Vermont Yankee Nuclear Power
Virginia Power Company
Washington Public Power Supply System
Wisconsin Public Service Corporation

## Non-Utilities

Abbott Laboratories
Allied Signal, Inc.
Analysis and Measurement Services Corporation
Argonne National Laboratory
Argonne National Laboratory-West
Babcock & Wilcox NNFD
Battelle Pacific Northwest National Laboratory
Brookhaven National Laboratory
BW/IP International, Inc.
Computer Simulation and Analysis, Inc.
Duke Engineering & Services
DuPont MERCK Pharmaceuticals
Electric Power Research Institute
Frametone Technologies
Hagler Bailly Consulting
Halliburton Energy Services
Interem, Inc.
International Technology Corporation
Interstate Nuclear Services Corporation
JBF Associates, Inc.
Knolls Atomic Power Laboratory
Lockheed Martin Energy Systems
Lockheed Martin Energy Research Corp.
Lockheed Martin Idaho Technologies
Lockheed Martin Utility Services
Los Alamos National Laboratory
Los Alamos Technical Associates, Inc.
Mason & Hanger - Silas Mason Company, Inc.
NAC International
Nuclear Fuel Services, Inc.
Oak Ridge Associated Universities, Inc.
Pickard, Lowe, & Garrick, Inc.
Plant Technical Services
Radiation Consulting Associates
Rogers & Associates Engineering Corporation
RSA Laboratories, Inc.
Rust Geotech, Inc.
Sandia National Laboratories
Science Applications International Corporation
Scientech, Inc.
Shonka Research Associates
Southeastern Universities Research Association
Stanford Linear Accelerator Center
Utility Resource Associates
West Valley Nuclear Services Company
Westinghouse Electric-Bettis Atomic Power Lab.
Westinghouse Hanford Company
Westinghous Electric Corp-Naval Reactor Facility