

Energy Management Jobs Report: Survey of the Energy Industry



Relevant Trends, Opportunities, Projections and Resources

Presented by



Energy Management Jobs: Survey of the Energy Industry

The Association of Energy Engineers (AEE), a nonprofit professional society of over 16,000 members, issued a survey to its members to determine the need for Energy Management Jobs, Energy Industry Potential, and Salary Data. The results represented are based on 2,967 responses and are outlined in this report. AEE was founded in 1977, and its mission is “*to promote the scientific and educational interests of those engaged in the energy industry and to foster action for sustainable development.*”

Profile of Respondents

- Eighty-five percent (85%) have graduated from a four-year accredited college
- Forty-two percent (42%) have a post-graduate degree from an accredited college
- Thirty-four percent (34%) are registered Professional Engineers or Architects
- Seventy-nine (79%) are certified in one or more of the following categories:
 1. Certified Energy Manager (CEM®)
 2. Energy Manager in Training (EMIT™)
 3. Certified Energy Auditor (CEA™)
 4. Certified Sustainable Development Professional (CSDP®)
 5. Certified Green Building Engineer (GBE®)
 6. Business Energy Professional (BEP®)
 7. Certified Lighting Efficiency Professional (CLEP™)
 8. Certified Power Quality Professional (CPQ®)
 9. Certified Building Commissioning Professional (CBCP®)
 10. Distributed Generation Certified Professional (DGCP™)
 11. Certified Measurement & Verification Professional (CMVP®)
 12. Certified Energy Procurement Professional (CEP®)
 13. Certified Indoor Air Quality Professional (CIAQP™)
 14. Certified GeoExchange Designer (CGD®)
 15. Certified Carbon Reduction Manager (CRM®)
 16. Certified Building Energy Simulation (BESA™)
 17. Certified in the Use of RETScreen® (CRU™)
 18. Certified High Performance Building Professional (HPB™)
 19. Certified Building Energy & Sustainability Technician (BEST™)
 20. Government Operator of High Performance Buildings (GOHP™)

2013 AEE Member Survey

Is there a shortage today of energy management professionals?

Answer Options	Response Percent
Yes	66.9%
No	33.1%

Do you plan to retire in the next five years?

Answer Options	Response Percent
Yes	13.6%
No	86.4%

Do you plan to retire in the next ten years?

Answer Options	Response Percent
Yes	31.7%
No	68.3%

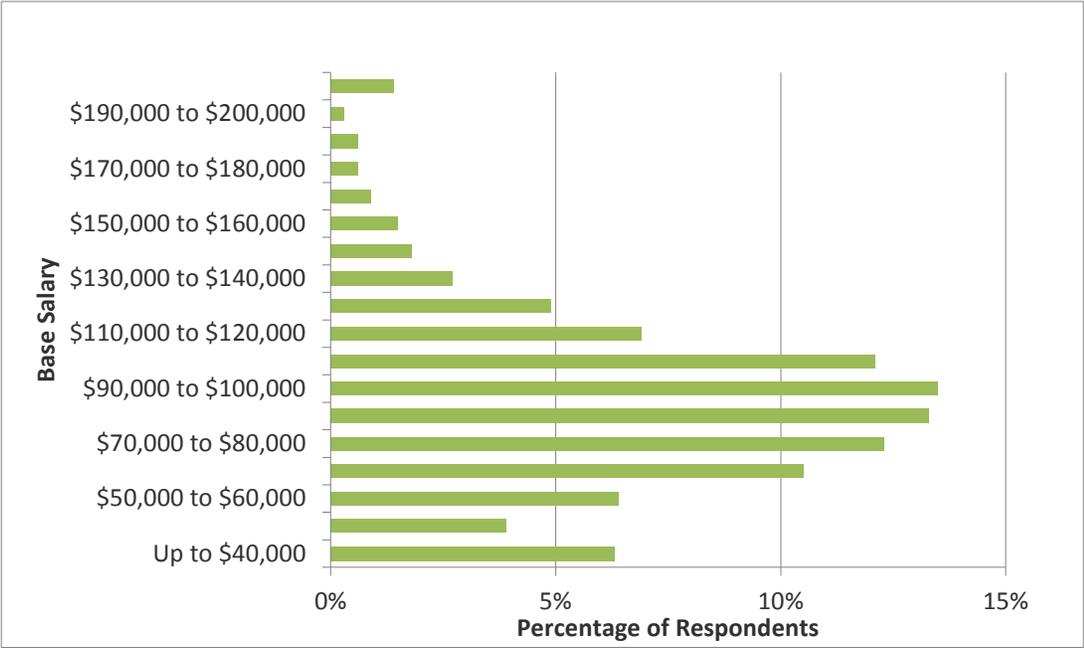
Do you feel there will be a shortage of qualified professionals in the energy efficiency and renewable energy field within the next five years?

Answer Options	Response Percent
Yes	60.4%
No	39.6%

Please input your base salary as of January 1, 2013. Please do not answer if you are a student.

Answer Options	Response Percent
Up to \$40,000	6.3%
\$40,000 to \$50,000	3.9%
\$50,000 to \$60,000	6.4%
\$60,000 to \$70,000	10.5%
\$70,000 to \$80,000	12.3%
\$80,000 to \$90,000	13.3%
\$90,000 to \$100,000	13.5%
\$100,000 to \$110,000	12.1%
\$110,000 to \$120,000	6.9%
\$120,000 to \$130,000	4.9%
\$130,000 to \$140,000	2.7%
\$140,000 to \$150,000	1.8%
\$150,000 to \$160,000	1.5%
\$160,000 to \$170,000	0.9%
\$170,000 to \$180,000	0.6%
\$180,000 to \$190,000	0.6%
\$190,000 to \$200,000	0.3%
Over \$200,000	1.4%

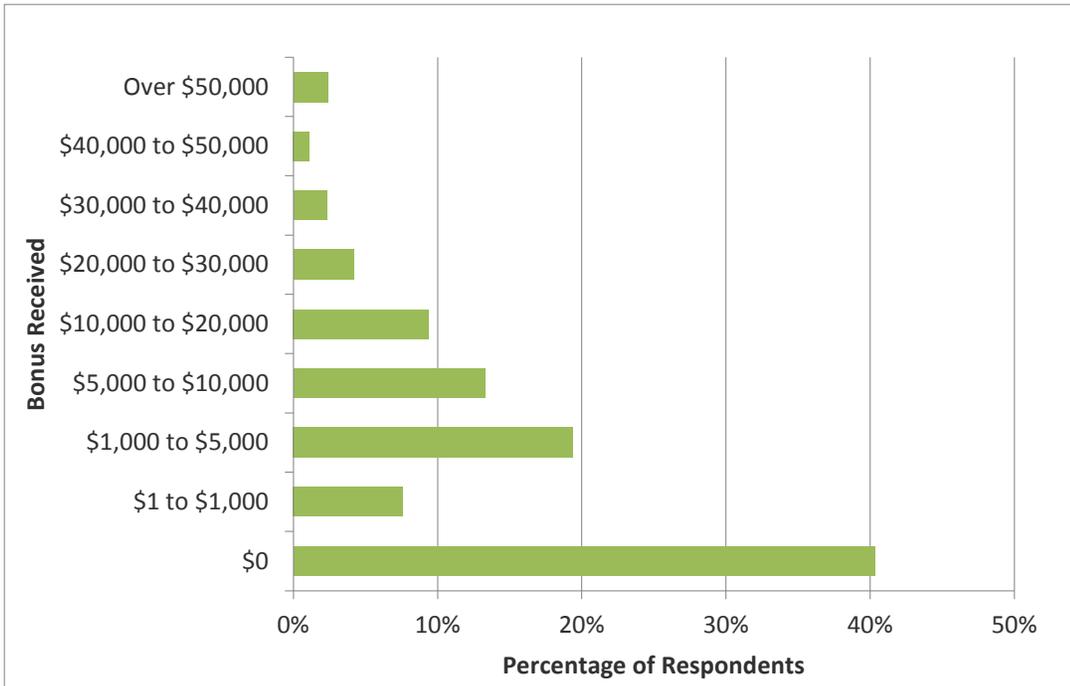
Average Salary: \$98, 552



Please indicate any bonus you received last year

Answer Options	Response Percent
\$0	40.3%
\$1 to \$1,000	7.6%
\$1,000 to \$5,000	19.4%
\$5,000 to \$10,000	13.3%
\$10,000 to \$20,000	9.4%
\$20,000 to \$30,000	4.2%
\$30,000 to \$40,000	2.3%
\$40,000 to \$50,000	1.1%
Over \$50,000	2.4%

Average Bonus: \$8,937



Are you a graduate from a 4-year accredited college?

Answer Options	Response Percent
Yes	85.3%
No	14.7%

Do you have a post-graduate degree from an accredited college?

Answer Options	Response Percent
Yes	41.6%
No	58.4%

Are you a registered Professional Engineer?

Answer Options	Response Percent
Yes	34.3%
No	65.7%

Are you a Registered Architect?

Answer Options	Response Percent
Yes	1.3%
No	98.7%

Do you hold a valid certification from AEE (i.e. CEM, CEA, BEP, BEST, etc.)?

Answer Options	Response Percent
Yes	79.2%
No	13.3%
In process of obtaining	7.5%

Are you a Certified Energy Manager® (CEM®)?

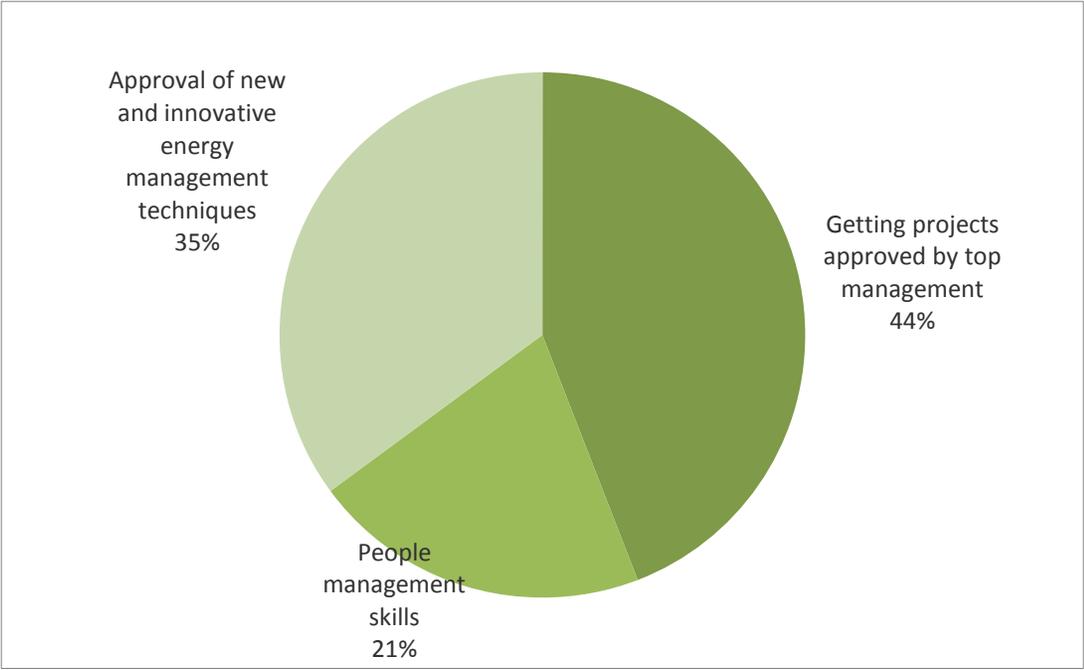
Answer Options	Response Percent
Yes	65.0%
No	22.1%
In process of obtaining	7.4%
Plan to obtain this year	5.5%

What would best describe your field of work?

Answer Options	Response Percent
Energy Manager at a Company/End User	12.4%
Energy Manager in a Government Facility	11.3%
Facility Manager	7.7%
Contractor	7.5%
Institution/Educator	1.8%
Institutional Energy Manager	3.5%
Consultant to End User	23.5%
Project Management/Engineer	21.7%
Utility Account Manager	7.1%
ESCO	11.3%
Energy Executive	3.6%
Other	12.6%

What is most challenging about your job?

Answer Options	Response Percent
Getting projects approved by top management	44.1%
People management skills	20.8%
Approval of new and innovative energy management	35.1%

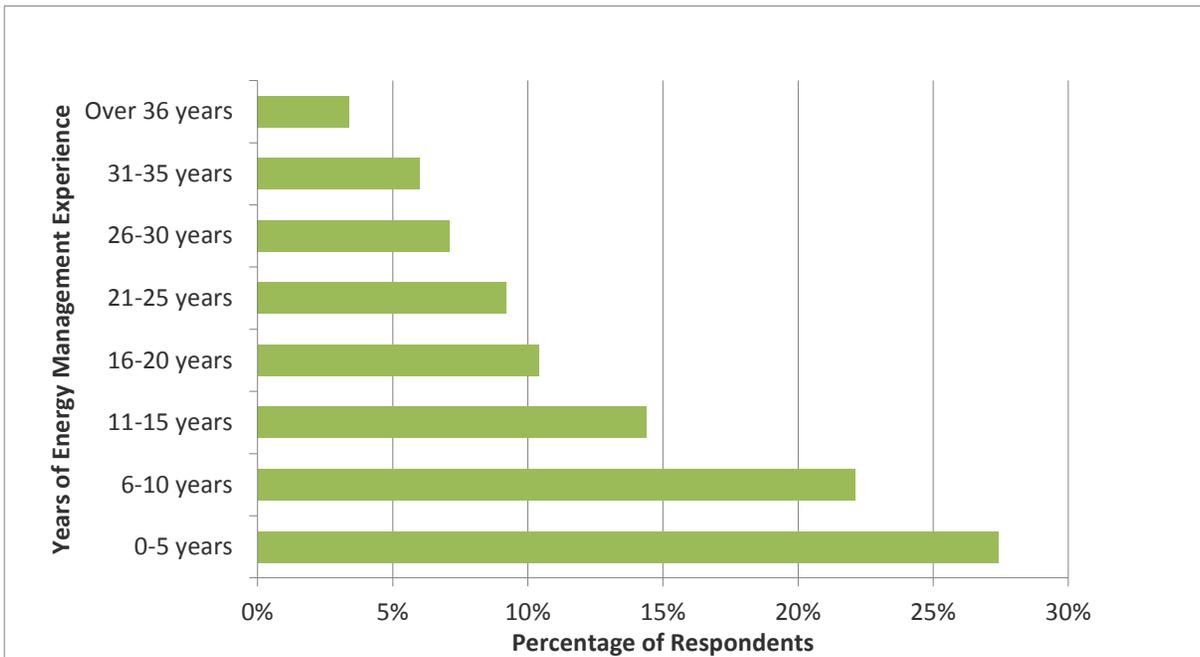


Is your company currently

Answer Options	Response Percent
Adding energy management staff	26.3%
Downsizing energy management staff	5.4%
Not changing energy management staffing levels	68.3%

How many years of energy management experience do you have?

Answer Options	Response Percent
0-5 years	27.4%
6-10 years	22.1%
11-15 years	14.4%
16-20 years	10.4%
21-25 years	9.2%
26-30 years	7.1%
31-35 years	6.0%
Over 36 years	3.4%



Earning an AEE certification credential has helped or will help my career?

Answer Options	Response Percent
Yes	86.9%
No	13.1%

Since you have received your AEE certification, are you receiving higher compensation than before?

Answer Options	Response Percent
Yes	34.5%
No	65.5%

Since you received your AEE certification, are you receiving higher visibility?

Answer Options	Response Percent
Yes	59.5%
No	40.5%

Since you have received your AEE certification, are you in a better position for advancement?

Answer Options	Response Percent
Yes	63.4%
No	36.6%

Earning an AEE certification has benefited or will benefit my firm?

Answer Options	Response Percent
Yes	87.0%
No	13.0%

Earning an AEE certification has given my firm a competitive edge in respect for requests for proposals?

Answer Options	Response Percent
Yes	59.0%
No	41.0%

Information & Resources

"We're in a competition all around the world, and other countries ...know that clean energy technology is what is going to help spur job creation and economic growth for years to come." – *President Barack Obama*

The Bureau of Labor Statistics (BLS) defines green jobs as either “jobs in businesses that produce goods or provide services that benefit the environment or conserve natural resources [OR] jobs in which workers’ duties involve making their establishment’s production processes more environmentally friendly or use fewer natural resources.”

“The aggressive pursuit of comprehensive energy efficiency policies and initiatives could potentially save \$1.2 trillion by 2020. Such substantial savings would stimulate the sluggish economy by freeing resources to bolster productivity and thus provide opportunities for job creation. Looking at the long term, it is estimated that by investing in and deploying existing and more advanced technologies, the United States’ economy could support a net increase of 1.3 to 1.9 million jobs by 2050.” *American Council for an Energy-Efficient Economy*

“The clean economy, which employs some 2.7 million workers, encompasses a significant number of jobs in establishments spread across a diverse group of industries. Though modest in size, the clean economy employs more workers than the fossil fuel industry and bulks larger than bioscience but remains smaller than the IT-producing sectors. Most clean economy jobs reside in mature segments that cover a wide swath of activities including manufacturing and the provision of public services such as wastewater and mass transit. A smaller portion of the clean economy encompasses newer segments that respond to energy-related challenges. These include the solar photovoltaic (PV), wind, fuel cell, smart grid, biofuel, and battery industries.” [*The Brookings Institution*](#)

According to a report by [Environmental Entrepreneurs \(E2\)](#):

- **“Public transportation drove clean job growth nationwide**, clocking in at over 43,000 jobs over the course of the year. Power generation, most of which came from solar, wind, and geothermal, came in second with more than 30,000 jobs.
- **Solar power was a strong and steady job creator throughout the year**, and especially in the fourth quarter, providing over 19,000 jobs between the manufacturing and power generation sectors.
- **Investment in energy efficiency hit a record high** of \$5.6 billion in 2012, according to E2’s analysis of government data, thanks to the announcement of as many as 9,000 new jobs.
- **Uncertainty over the production tax credit hit wind energy**, leading to a decline in job creation announcements in the fourth quarter, even as capacity installation ramped up at the end of the year to get in under the anticipated expiration. But now that the “fiscal cliff” deal has extended the credit for another year, 2013 expectations show wind energy regaining some of its momentum.”

“...the solar industry now employs 119,016 Americans across all 50 states, having grown 13.2 percent over last year during difficult economic times across the nation. In 2011, the solar energy industry employed 105,145 workers, while 93,502 were employed by solar companies in 2010.

Census participants named strong federal solar policy, such as the solar investment tax credit, as one of the most important factors driving growth of solar jobs over the past 12 months. Additionally, one-third of respondents cited the continued decline in solar energy prices as the primary driver of employment growth. State pro-solar policies, including renewable portfolio standards, and the popularity of new third-party system ownership models were other factors creating jobs.” *Solar Energy Industries Association*

“From 2000–2008, green construction and renovation generated \$1.3 billion in energy savings. Of that \$1.3 billion, LEED-certified buildings accounted for \$281 million. Forecasted energy savings are even more dramatic. From 2009 – 2013, the overall green construction market is expected to generate \$6 billion in energy savings. Of that \$6 billion, LEED-certified buildings may account for as much as \$4.8 billion of the total.” *United States Green Building Council*

“In 2010, the Council of Economic Advisers estimated that around 3 million jobs had been either saved or created by the ARRA, and it created 63,000 jobs directly in 2011. Every sector of the clean energy market experienced at least 8.9% growth during this time, with solar energy expanding 18.4%. In 2009-2011, the US Solar Industry added 150,000 new jobs, the US wind industry added 35,600 new jobs, the geothermal industry added 43,000 new jobs, and the hydro-power industry added 300,000 new jobs.

Jointly the fields are expected to add over 700,000 direct jobs by the end of 2012. And many more jobs were added through indirect job creation, such as in the shipping field, which is used to transport materials to job sites and new factories. At the end of 2011, the US Department of Labor estimated that there were over 3.1 million clean energy jobs, which included both direct and indirect jobs using a broad definition.” *PennEnergy*

“In 2011, the percentage of total employment associated with the production of Green Goods and Services (GGS) increased by 0.1 percentage point to 2.6 percent, the U.S. Bureau of Labor Statistics reported today. The number of GGS jobs increased by 157,746 to 3,401,279. GGS employment accounted for 2.3 percent of private sector jobs and 4.2 percent of public sector jobs in 2011. The private sector had 2,515,200 GGS jobs, while the public sector had 886,080 GGS jobs. Among private sector industries, construction had the largest employment rate increase, from 7.0 to 8.9 percentage points, while manufacturing had the most GGS jobs (507,168).” – *Bureau of Labor Statistics*

Training Opportunities

The Association of Energy Engineers offers a variety of professional training and re-training programs, including:

- Training seminars, conferences, and industry networking (energy, sustainability, energy auditing, power, green facilities, certification programs)
 - <http://www.aeecenter.org/realtime> (Online training seminars)
 - <https://www.aeecenter.org/seminars/calendar.htm> (Live seminar training)
 - <http://www.aeecenter.org/shows> (energy industry conferences and networking events)

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