

# Green Jobs: Survey of the Energy Industry



## Relevant Trends, Opportunities, Projections & Resources

*Presented by the Association of Energy Engineers*

- Profile of Respondents
- Survey Results
- Policy & Trends
- Salary & Experience Levels
- Job Titles & Resources
- Additional Resources



# Green Jobs: Survey of the Energy Industry

The Association of Energy Engineers (AEE), a nonprofit professional society of over 14,000 members, issued a survey to its members to determine the need for Green Jobs, Energy Industry Potential, Stimulus Results and Salary Data. The results represented are based on 1,934 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-six percent (86%) have graduated from a four-year accredited college.
- Forty percent (40%) have a post-graduate degree from an accredited college.
- Thirty-five percent (35%) are registered Professional Engineers (P.E.s) or Architects.
- Eighty percent (80%) 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 and Verification Professional (CMVP®)
12. Certified Energy Procurement Professional (CEP®)
13. Certified Indoor Air Quality Professional (CIAQP™)
14. Certified Indoor Air Quality Professional in Training (CIAQT™)
15. Certified Geo-Exchange Designer (CGD®)
16. Certified Carbon Reduction Manager (CRM™)
17. Certified Building Energy Simulation Analyst (BESA™)
18. Certified in the Use of RETScreen® (CRU™)
19. Certified High Performance Building Professional (HPB™)
20. Certified Building & Sustainability Technician (BEST™)

# Section One: Green Jobs

There is a growing demand for energy efficiency, green collar and renewable energy professionals in light of the following trends:

## **1. Survey Results**

### *Dwindling Supply of Energy Professionals in the Industry*

- Thirty-two percent (32%) of energy professionals surveyed plan to retire in the next ten years.
- Sixty-seven percent (67%) of energy professionals indicate a heightened shortage of qualified professionals in the energy efficiency and renewable energy fields in the next five years.
- Seventy-two percent (72%) of energy professionals indicate a need for national and state training for "Green Jobs" to address job shortages that are impairing growth in green industries, such as energy efficient buildings and construction, renewables, electric power, smart grid, energy efficient vehicles and bio fuels development.

### *Professional Certification Results in Enhanced Career Success*

- Seventy-four percent (74%) of energy professionals surveyed responded that their company had benefited since they had received their certification
- Eighty-six percent (86%) of energy professionals surveyed indicated that, since receiving their certification, their company has been able to respond to more requests for proposals
- Fifty-two (52%) of energy professionals survey indicate that they are receiving higher professional visibility since receiving their certification

## **2. Green Job Growth - Trends and Opportunities**

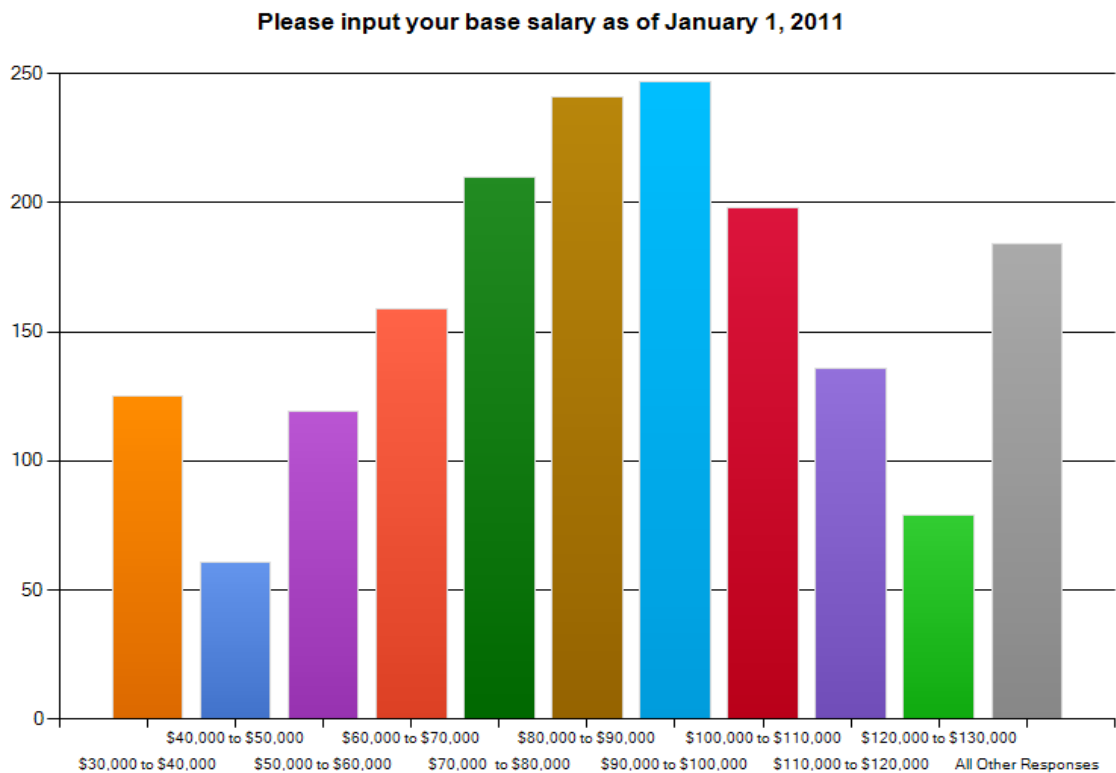
- [ACEEE](#) reports that existing *energy efficiency standards created a net 340,000 American jobs in 2010*.
- According to the Center for American Progress ([March 2010 report](#)): By 2020, clean energy will be one of the world's biggest industries, totaling as much as \$2.3 trillion.
- A [Pike Research report](#) (2011) indicates that the U.S. retro-commissioning market could grow from \$160 million in 2010 to \$1.8 billion by 2014, under an aggressive forecast scenario. The baseline scenario still provides for significant growth, up to \$759 million by 2014.

## Section Two: Salary Survey

The information in this section is based on the salary survey conducted by the Association of Energy Engineers.

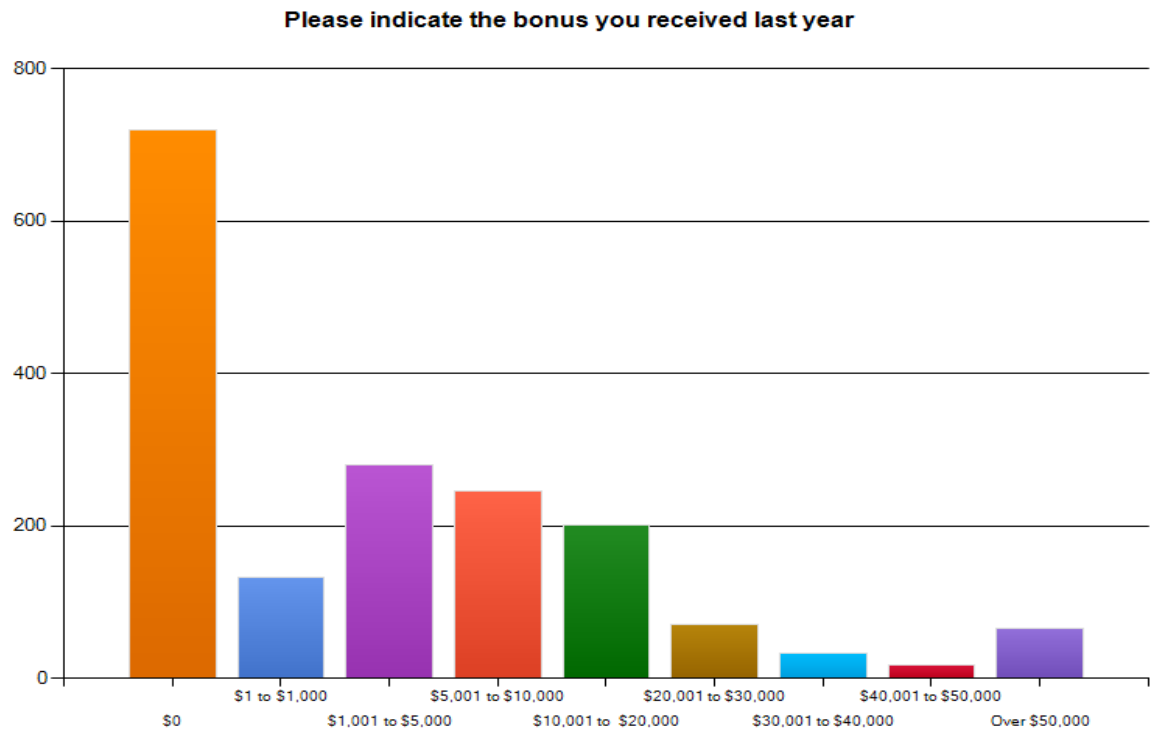
### 1. Salary

The chart below indicates the respondents' base salary. The salary is the base salary and excludes any bonuses, overtime and fees from secondary employment. Salaries are effective as of January 1, 2010:



***Average Salary: \$96,683***

## 2. Bonus- Bonuses received by respondents:



*Average Bonus: \$7,356*

## 3. Years of Experience of Energy Professionals

0-5 Years: 10%  
6-10 Years: 11%  
11-15 Years: 12%  
16-20 Years: 12%  
21-25 Years: 16%  
26-30 Years: 16%  
31-35 Years: 13%  
Over 36 Years: 8%

## **Section Three: Employment Opportunities & Papers**

The Association of Energy Engineers maintains a career web site detailing energy, green, sustainable and power positions and jobs available as well as a resume databank with individuals seeking employment. Details are indicated at <http://www.aeecenter.org/jobs>

There is also access to an energy industry dictionary of terms, free access to energy – green white papers, industry news portal, as well as professional reference books. [www.energyvortex.com](http://www.energyvortex.com)

**[CLICK HERE TO VIEW CURRENT JOBS IN THE AEE CAREER CENTER](#)**

**[CLICK HERE TO VIEW CURRENT JOBS IN THE AEE LINKEDIN JOBS GROUP](#)**

## **Section Four: Training Opportunities**

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

- Training Seminars, Conferences & Industry Networking (Energy, Sustainability, Energy Auditing, Power, Green Facilities, Certification Programs)
  - Online training seminars - [www.aeecenter.org/realtime](http://www.aeecenter.org/realtime)
  - Live seminar training - <https://www.aeecenter.org/seminars/calendar.htm>
  - Energy Industry Conferences & Networking Events - [www.aeecenter.org/shows](http://www.aeecenter.org/shows)

### **Training Partnerships:**

The Association of Energy Engineers is currently working with a cross-section of institutions, organizations and Universities to offer additional energy management, green, sustainable, renewables and industry training programs. Featured programs include:



The *American Recovery and Reinvestment Act of 2009* (“The Stimulus Bill”) includes funding for “job training projects that prepare workers for careers in energy efficiency and renewable energy”. The U.S. Department of Labor, through the existing Workforce Information Act (WIA) will be responsible for administration of all training under this Act.

The State Dept. of Labors and WIA Groups have listed AEE as an Eligible Training Provider for specific energy training in several states so far. Although targeted for the unemployed, funding for this training may be available to anyone looking to increase their occupational skills. AEE is currently approved to provide training through the WIA

in the following states:

[California](#), [Colorado](#), [Georgia](#), Idaho, Kentucky, [Maine](#), [Massachusetts](#), Minnesota, [Montana](#), [New York](#), [Nevada](#), [North Carolina](#), [Oklahoma](#), Oregon, South Carolina, [Vermont](#), [Virginia](#), [Washington](#), and [Wisconsin](#) (more states pending)



The Association of Energy Engineers is now an approved training provider within the American Institute of Architects (AIA) Continuing Education Systems (CES) Registered Provider program. The AIA requires that its registered architect members earn 18 Learning Unit (LU) hours of continuing education credit annually (eight hours of which must be related to Health, Safety, and Welfare topics and four of those eight in Sustainable Design) to remain in good standing. Architectural boards in 40 states, 10 Canadian Provinces, and 19 countries have implemented mandatory continuing education (MCE) for re-licensure. Statistically, architects hold multiple state licenses. Most states with MCE requirements recognize the AIA/CES as the primary source of professional development for their licensed architects. This allows AIA members to present their AIA/CES transcripts (and non-members AIA/CES Certificates of Completion) to licensing boards to satisfy state requirements. In becoming an AIA/CES Registered Provider, AEE is committed to a system-wide, top-down commitment to quality professional continuing education and sound administration. The AIA/CES offers providers of professional continuing education myriad opportunities to award CES Learning Units & provide valuable information & guidance, while bypassing the time-consuming process of registering their courses with individual states.



*CEI Energy Savings Program*

Pepco & Delmarva Power Commercial & Industrial Operations & Maintenance Training Initiative: The Association of Energy Engineers is pleased to announce that many of its professional seminars now qualify for partial reimbursement of seminar fees for pre-qualified professionals based on eligibility for the Pepco & Delmarva Power Commercial & Industrial Training Initiative.

*About the Program:* Financial incentives are available for training that will promote, either directly or indirectly, the enhanced energy performance of buildings. An applicant must describe his or her current position responsibilities and how the proposed training course is relevant to the employer, the applicant's current position, and/or career development with the employer. Only applicants who have the potential to influence a building's energy performance will be considered.



The Association of Energy Engineers (AEE) has a Memorandum of Understanding with UC Davis University Extension (UCDE) to advance the knowledge and professionalism in the field of energy management. As an adjunct to the Certified Energy Manager (CEM®) and Business Energy Professional (BEP® program) AEE pleased to be an official sponsor of the **U.C. Davis University Energy Resource Management Certificate program**. This initiative aims at enhancing student's involvement and increases their role in the growing energy management discipline. The course will serve as a solid foundation for students to move towards obtaining their CEM or BEP Certification. For more information on the U.C. Davis certificate program [CLICK HERE](#). UC Davis Extension is the professional and continuing education branch of UC Davis and is a link to the many resources students can only get from the University of California.



The American Council on Renewable Energy (ACORE) and the Association of Energy Engineers (AEE) recently signed a memorandum of understanding to recognize the [Fundamentals of Renewable Energy: Technologies, Applications & Strategies](#) training seminar as well as the [Renewable Energy Professional \(REP\) certification](#) exam. ACORE will appoint an official to the Renewable Energy Professional Certification Board, and provide feedback as to course content as the renewable energy marketplace changes. According to Albert Thumann, Executive Director of AEE, "We are pleased to work in cooperation with ACORE and its participating members to develop an in-depth technology and solutions seminar for the rapidly growing renewable energy marketplace. ACORE has a strong presence in Washington, DC and has brought together a growing list of leading corporate members. ACORE's involvement brings added critical insight into renewable energy policy developments, market trends, and technology innovations." ACORE is a non-profit organization based in Washington, D.C. with members representing every aspect and sector of the renewable energy industries and their trade associations, including wind, solar, geothermal, biomass and biofuels, hydropower tidal/current energy and waste energy. The scope of ACORE's membership also spans financial institutions, government leaders, educators, end-users, professional service providers and allied non-profit groups. ACORE members receive a savings of \$100 off the regular registration fee for the Fundamentals of Renewable Energy seminar when registering online. (To receive this savings, use Discount Code *acoremem* when checking out).





The Clean Energy & Renewable Energy Project Feasibility Analysis Training Series. AEE is adding a series of nine courses focusing on Clean Energy/Renewable Energy Project Feasibility Analysis to its 24/7 Online Seminar Program via training partnership with Willis College. Included in each of these courses is an in-depth overview of relevant technologies and projects, system costs, implementation savings, and design considerations, as well as theory on using related tools to conduct a project feasibility analysis. To learn more about these courses [click here](#).



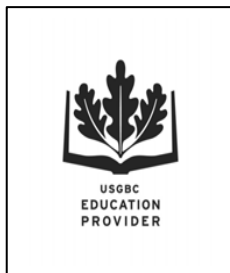
AEE has teamed up with the University of Wisconsin -Madison Engineering Professional Development Department to offer Fundamentals of Lighting Efficiency training seminar on a real-time, online basis. Presented in a series of six two-hour time modules, this program is designed to provide comprehensive professional training in the design and application of energy- effective lighting systems, with emphasis on: Evaluating lighting systems

through effective audits, Achieving energy-effective lighting systems with high regard to lighting quality and occupants, Examining the latest lighting products for your applications, Performing lighting calculations to obtain proper light levels, Evaluating and implementing effective lighting control strategies, Reviewing environmental impacts of lighting efficiency projects, Calculating and documenting savings achieved through lighting improvements, Assuring compliance with building energy codes, and Implementing effective lighting maintenance practices. For more information on this programs, please refer to [online training here](#).

AEE Partners the Green Building Engineer Certification (GBE™) Program with US EPA ENERGY STAR Challenge. AEE's participation in the ENERGY STAR Challenge – Build a Better World 10% at a Time is a natural extension of AEE's efforts to encourage its members to reduce energy usage in buildings by 10% or more. AEE is committed to provide training and certification opportunities to help the profession meet the ENERGY STAR Challenge ahead. To find a



Professional Engineer (P.E.) and/or GBE, please refer to EPA's online directory: [http://www.energystar.gov/index.cfm?fuseaction=PE\\_DIRECTORY](http://www.energystar.gov/index.cfm?fuseaction=PE_DIRECTORY).



#### U.S. Green Building Council

The Association of Energy Engineers is a qualified education provider under the U.S. Green Building Council educational program and its programs are featured in the [GREENBUILD 365 course catalogue](#). Whether you are a design, construction or real estate professional, an educator or student, or a LEED AP, Greenbuild365's rich variety of educational offerings will inform your journey from novice to expert and beyond. Information on a broad range of green building topics is available in formats tailored to your knowledge level and preferred learning style, whether you're looking for in-person interaction, online courses you can take in the comfort of your own home, or do-it-yourself research through an extensive online media library.



The Georgia Tech Enterprise Innovation Institute works with Georgia enterprises to help them compete nationally and internationally. By calling on the resources of Georgia Tech – one of the world's leading engineering, technology and research universities – our team can keep you current with the leading research, methods, technology and more in your industry. The Certified Energy Manager (CEM) Program is recognized by the [Georgia Tech Enterprise Innovation Institute](#) and they have several faculty on staff with CEM Certification.





The GHG Gas Management Institute and the Association of Energy Engineers have signed Cooperative Agreement to offer additional educational & training options to their respective members. The GHG Institute offers rigorous training that meets the needs of both individuals and organizations working on all aspects of climate change. The Institute's training courses are authored by leading experts in their fields. Using our interactive e-learning system and specialized onsite workshops, we are able to meet the training needs of both beginners and experienced professionals anywhere in the world. The Institute's membership program connects the largest global community of greenhouse gas and climate change experts in the world and is developing courses in multiple languages. As a nonprofit U.S.-based 501(c)(3) organization, financial aid and full scholarships are available to qualified applicants, especially from developing countries and those working for non-profit organizations.



The Institute of Industrial Engineers (IIE) has formed a joint venture agreement with AEE for the [Fundamentals of Carbon Reduction](#) live seminar program and the [Fast Track CRM Training Program for Carbon](#)

[Reduction Managers](#) online seminar. IIE, a leading association in support of the industrial engineering professional, is an official co-sponsor of these programs and will be offering them to its broad, strategic membership base. IIE helps to elevate the image and prominence of industrial engineers (IE). By bestowing awards that recognize the achievements of prominent IEs, taking part in high-profile events such as National Engineers Week, and working on campaigns that put industrial engineering in the minds of the public, IIE raises the awareness of contributions made by industrial engineers.



Corporate College has signed an agreement of partnership with the Association of EnergyEngineers to deliver AEE training in the field of energy management in the Midwest region. According to a program manager for Corporate College, "This partnership will ensure the region's talented workforce is prepared with the valuable credentials needed to meet the growing demand for energy management/green collar jobs." You can register online for courses offered under this partnership at [www.corporatecollege.com](http://www.corporatecollege.com) or Contact:

Geraldine Weiser, 216-987-2860, Email: [Geraldine.weiser@tri-c.edu](mailto:Geraldine.weiser@tri-c.edu).



The Western New England College School of Engineering recently signed a Memorandum of Understanding (MOU) with AEE whereby the College will develop an extensive Renewable & Alternative Energy System Design course, and offer the Certified Energy Manager (CEM®) Certification Exam to attendees. The Association of Energy Engineers is expanding the Certified Energy Manager program offerings as more

States are adopting the CEM as a standard, and numerous corporations are making the CEM credential a job requirement. To register for this course please contact the provider directly:

Email: [CMFENGRINC@aol.com](mailto:CMFENGRINC@aol.com) / Springfield, Massachusetts <http://www.wnec.edu>



### **Gateways to Green Building (California)**

AEE is a partner with the South Bay Workforce Investment Board (SBWIB) in Hawthorne, CA for a grant award made under the California Clean Energy Workforce Training Program, the nation's largest state-sponsored clean energy jobs training program. SBWIB will be receiving federal economic stimulus funds from the State of California for the Gateways to Green Building Pre-Apprenticeship Program, a collaborative program designed to prepare new workforce entrants, the unemployed, and underemployed workers for candidacy and entrance into registered apprenticeship programs and employment in green building occupations. AEE is holding the Sustainable Development Technician program with this initiative.



LIPA is building partnerships with Long Island Trade Allies to increase the level of awareness of newer-more efficient technologies, enhance our delivery of service, and serve as a reliable resource. The Online Learning Center enables Trade Allies to earn continuing education credits (CEUs) or professional development hours (PDHs) via the Internet. Learn more about

LIPA here: <http://www.lipower.org/commercial/trade/online.html>



AEE and the Association of Facilities Engineering (AFE) have created a strategic partnership to leverage the resources of both organizations to promote the educational interests of professionals engaged in energy engineering and expand industry knowledge of the use of energy efficiency and to better understanding the realm of Facilities Engineering.

## **Section Five: Green Jobs, Energy Jobs & Titles**

There are many currently many “green collar” jobs which exist in the current marketplace. The job titles listed below are typical energy, sustainable, green, environmental and industry jobs based on the actual survey responses of AEE members and participants of AEE programs. These are some of the hot growth areas for professional entering or transitioning into the energy – green field.

Account Manager/Executive  
Account Manager – Building Automation  
Systems Sales  
Advisor for Management and Energy  
Agency Energy and Environmental Manager

**A**

Application Engineer/Technician  
Architect  
Auditor  
Automated Controls Technician

**B**

Building Automation Systems Engineer  
Building Consultant/Engineer  
Building Control Specialist  
Building Energy Engineer  
Building Energy Analyst

Building Services Engineer  
Business Development Manager  
Business Services Engineer  
Business Unit Energy Services

**C**

Campus Energy Manager  
Carbon Consultant  
Carbon Reduction Manager  
Central Plant Engineering Manager  
Certified Energy Manager  
Certified Geothermal Designer  
Chief of Energy Engineering  
Certified Energy Auditor  
Chief Operations and Maintenance  
Chiller Team Manager  
Civil Engineer  
Climate Change Consultant  
Climate Initiative Program Director  
Cogeneration Manager  
Command Utility Energy Engineer  
Commercial Engineering Manager  
Commercial and Industrial Energy Services  
Engineer  
Commercial Energy Management Consultant  
Commissioning Manager  
Commissioning Engineer  
Commissioning Technician  
Commercial/Industrial Services Manager  
Compressed Air Specialist  
Conservation Engineer  
Conservation Program Engineer  
Construction Manager  
Construction Manager/Designer  
Construction Project Manager

Construction Services Manager  
Construction/Facilities Manager  
Consultant  
Consulting Engineer  
Controls and Commissioning Manager  
Controls and Energy  
Controls Engineer  
Controls Manager  
Controls Specialist  
Coordinator of Environmental Services  
Coordinator of Infrastructure  
Coordinator of Energy Management  
Coordinator of Residential Energy Programs  
Corporate Director Engineering and  
Construction  
Corporate Director of Energy Management  
Corporate Director of Energy and Environmental  
Services  
Corporate Director Plant Operations  
Corporate Energy Coordinator  
Corporate Energy Director  
Corporate Energy Management Leader  
Corporate Energy Manager  
Corporate Facilities/Energy manager  
Corporate Facilities Manager  
Corporate Facilities Engineer  
Corporate Manager of Building Operations  
Corporate Project Manager  
Corporate Utilities Manager

**D**

Design Engineer  
Design Build/Energy Engineer  
Design Manager  
Design/Energy Engineer  
Development Engineer  
Distributed Energy Manager

Distribution Standards Engineer Demand-  
Side Management Coordinator Demand-  
Side Management Engineer Demand-Side  
Management P&E Specialist  
Demand-Side Management Program Consultant

## E

Electric Engineering Officer	Energy Management/Environmental System Consultant
Electric Meter Relay Technician	Energy Manager
Electric Utility Analyst	Energy Performance Analyst
Electric Utility Project Coordinator	Energy Plant Manager
Electrical & Energy Manager	Energy Procurement Manager
Electrical & Instrument Engineer	Energy Program Coordinator
Electrical and Controls Engineer	Energy Program Engineer
Electrical and Mechanical Engineer	Energy Program Manager
Electrical Consultant Engineer	Energy Program Specialist
Electrical Coordinator	Energy Programming Technician
Electrical Design Engineer	Energy Project Development
Electrical Designer	Energy Project Engineer
Electrical and Automation Engineer	Energy Project Manager
Electrical Engineer	Energy Projects Specialist
Energy Engineer	Energy Resource Conservation Specialist
Energy Manager	Energy Resource Manager
Energy & Sustainability Program Manager	Energy Sales Consultant
Energy & Commissioning Engineer	Energy Scientist
Energy & Environment Engineer	Energy Service Engineer
Energy & Environmental Consultant	Energy Service Manager
Energy & Environmental Manager	Energy Service Specialist
Energy & Sustainability Solutions Specialist	Energy Services Account Executive
Energy & Utilities Manager	Energy Services Advisor
Energy & Water Resource Planner	Energy Services Analyst
Energy Advisor	Energy Services Coordinator
Energy Analyst	Energy Services Program Consultant
Energy Auditor	Energy Services Project Developer
Energy Balance Engineering	Energy Services Project Manager
Energy Conservation Advisor	Energy Services Representative
Energy Conservation Analyst	Energy Services Specialist
Energy Conservation Consultant	Energy Services Supervisor
Energy Conservation Coordinator	Energy Solutions Analyst
Energy Conservation Engineer	Energy Solutions Consultant
Energy Conservation Manager	Energy Solutions Manager
Energy Conservation Program Manager	Energy Specialist
Energy Conservation Technical Specialist	Energy Supply Manager
Energy Coordinator	Energy Systems Engineer
Energy Education Specialist	Energy Technician
Energy Efficiency Program Director/Engineer	Energy Trader
Energy Efficiency Consultant	Energy/Environmental Consultant
Energy Efficiency Coordinator	Energy/Mechanical Manager
Energy Efficiency Engineer	Energy/Resource Conservation Program Manager
Energy Efficiency Program Manager	Energy/Utilities Engineer
Energy Efficiency Specialist	Energy/Utilities Manager
Energy Efficiency Technician Instructor	Engineer
Energy Facility Manager	Engineering & Environmental Services
Energy Information Manager	Engineering Analyst
Energy Management Analyst	Engineering and Design Supervisor
Energy Management Consultant	Engineering Consultant
Energy Management Engineer	Engineering Development Director
Energy Management Quality Consultant	Engineering Director
Energy Management Representative	
Energy Management Specialist	

Engineering Manager  
Engineering Specialist  
Engineering Technician  
Engineer – Load Management  
Environmental Health, Safety & Security Manager  
Environmental Solutions Manager  
Environmental & Utilities Manager  
Environmental & Energy Manager

Facilities & Compliance Analyst  
Facilities & Maintenance Manager  
Facilities and Construction Manager  
Facilities Consultant  
Facilities Coordinator  
Facilities Design & Construction Supervisor  
Facilities Design Engineer  
Facilities Electrical Engineer  
Facilities Electrical Systems Coordinator  
Facilities Energy Engineer  
Facilities Engineer

Gas & Energy Coordinator  
Gas Management Service Analyst  
Gas Supply & Technology Engineer  
General Engineer  
Geo-Exchange Designer  
Geothermal Operations Manager  
Geothermal Designer  
Global Commodity Manager-Energy  
Global Director Energy & Sustainability  
Global Director – Energy & Plant Services

Health and Safety Manager  
Health, Safety, and Environmental Manager  
HVAC Design Engineer  
HVAC Designer  
HVAC Engineer

Indoor Environmental Consultant  
Industrial Engineer  
Industrial Gas Engineer  
Infrastructure Engineer

LEED AP

Environmental Consultant  
Environmental Director  
Environmental Engineer  
Environmental Health & Safety Mgr.  
Environmental Manager  
Environmental Program Manager  
Environmental Project Manager  
Environmental Specialist  
Equipment Engineer

## F

Facilities Environmental Manager  
Facilities HVAC Engineer  
Facilities Manager  
Facilities Operations Manager  
Facilities Performance Analyst  
Facilities Plant Engineer  
Facilities Project Manager  
Facilities Systems Specialist  
Facility Energy Conservation Manager  
Field Engineer  
Fuel Analyst

## G

Global Energy & Climate Change Program  
Global Energy Director  
Global Energy Manager  
Global Energy Program Manager  
Global Energy Solutions Manager  
Global Environmental Engineer  
Global Energy Manager  
Green Building Engineer  
Greenhouse Gas Lead Assessor

## H

HVAC Facilities Manager  
HVAC Services Manager  
HVAC Systems Engineer  
HVAC Technician  
Hydro Geologist

## I

Installation Energy Manager  
Installation Manager  
Intelligent Building Specialist

## L

LEED Performance Assurance Engineer

Lighting Consultant  
Lighting Design Specialist

Lighting Engineer  
Load Analyst

## M

Maintenance Engineer  
Maintenance Manager  
Maintenance Planner  
Manager of Energy Initiatives  
Measurement & Verification Engineer  
Measurement & Verification Specialist  
Mechanical Design Engineer

Mechanical Designer  
Mechanical Engineer  
Mechanical Operations Manager  
Mechanical Project Engineer  
Mechanical Systems Engineer  
Mechanical Utilities Engineer

## N

National Energy Manager  
National Energy Services Manager

National Energy Solutions Specialist

## O

Operations & Energy Manager  
Operations & Maintenance Engineer  
Operations Analyst

Operations Engineer  
Operations Manager

## P

Performance Assurance Consultant  
Performance Assurance Engineer  
Performance Assurance Specialist  
Performance Contract Engineer  
Performance Contracting Energy Engineer  
Performance Engineer  
Performance Manager  
Plant Engineer  
Plant Manager  
Pollution Prevention Engineer  
Power Application Engineer  
Power Management Applications Engineer  
Power Optimization Engineer  
Power Plant Manager  
Power Quality Engineer  
Power Quality Specialist  
Power Resources Manager  
Power Systems Engineer  
Power Utilization Engineer  
Power, Energy & Environmental Market Manager  
Procurement Analyst  
Procurement Manager (Electric & Gas)

Product Manager  
Product Manager – Energy  
Production Engineer  
Professional Engineer  
Program Analyst  
Program Director  
Program Director - Energy  
Program Manager  
Program Manager – Corporate Energy Services  
Program Manager – Energy Services  
Program Manager – Renewable Energy  
Project Analyst  
Project Coordinator  
Project Development Engineer  
Project Developer  
Project Director  
Project Energy Engineer  
Project Energy Manager  
Project Engineer  
Project Manager  
Purchasing Director  
Purchasing Manager  
Purchasing Specialist

## Q

Quality Control Manager

Quality Engineer

## R



Refrigeration Engineer  
Reliability Engineer  
Renewable Energy Business Manager  
Renewable Energy Consultant

Resource Conservation Engineer  
Resource Conservation Manager  
Resource Efficiency Manager  
Retro-commissioning Engineer

## S

Safety & Environmental Coordinator  
Shipboard Resource Efficiency Manager  
Smart Grid Engineer  
Solar Energy Engineer  
Solar Energy Systems Designer  
Solution Design Specialist  
Solution Development Engineer  
Staff Engineer  
Staff Research Engineer  
State Energy Manager  
Storm water Planning & Engineer Supervisor  
Strategic Energy Analyst  
Surveillance Coordinator, Work Control  
Sustainable Development Professional

Sustainability Coordinator  
Sustainability Engineer  
Sustainability Leader  
Sustainability Manager  
Sustainable Building Analyst  
Sustainable Building Technologist  
Sustainable Design Specialist  
Sustainable Development Coordinator  
Sustainable Solutions Engineer  
System Applications Engineer  
System Control Operator  
Systems Analyst  
Systems Engineer

## T

Technical Advisor  
Technical Analyst  
Technical Consultant  
Technical Director  
Technical Engineer

Technical Facilities Assistant  
Technical Manager  
Technical Solutions Engineer  
Technical Specialist  
Test and Balance Engineer

## U

Utilities and Energy Director  
Utilities Engineer  
Utilities Manager

Utility Analyst  
Utility Conservation Representative

Waste Reduction Consultant  
Wastewater Engineer  
Water & Energy Management Specialist  
Wind Power Engineer

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# Additional Resources



## Energy, Power & Facilities 2012-2013 Conference & Expo Schedule

### AEE Programs

AEE presents a powerful schedule of energy efficiency, facility management, renewables & power conference & trade shows to connect buyers and sellers for sales lead generation, project implementation, and application need discussions. We invite you to participate in our programs for increased sales, new & retrofit projects, the exchange of ideas and client acquisition.



West Coast Energy Management Congress (EMC) / May 23-24, 2012 / Seattle, WA

EMC, presented by AEE, hosted by **Puget Sound Energy (PSE)** along with Sponsors such as **Seattle City Light, Snohomish County PUD** and others, is the largest energy conference and technology expo held on the U.S. West Coast specifically for business, industrial and institutional energy users. EMC celebrates its 30<sup>th</sup> anniversary bringing together the top experts in all areas of the field to help you set a clear, optimum path to *Energy Efficiency, Facility Optimization, Sustainability, Energy Measurement & Retrofit Potential* as well as innovation solutions to improve your ROI. Learn more about the event at <http://www.energyevent.com>



World Energy Engineering Congress (WEEC) / Oct. 31-Nov.1, 2012/ Atlanta, GA

WEEC, presented by AEE and including Sponsors such as **Georgia Power, Trane, Geico** and others, is well-recognized as the most important energy event of national and international scope for end users and energy professionals in all areas of the energy field. Celebrating its 35<sup>th</sup> year, WEEC features a large, multi-track conference agenda, including Keynote Speakers, **General Colin L. Powell USA (Ret.), Jimmy Carter, Jay Hakes, and Susan Story**. Each year, thousands of professionals from all over the world are drawn to WEEC by outstanding educational sessions and speakers, special seminars and networking events, and a huge exhibit hall featuring the newest products and technologies. Learn more at <http://www.energycongress.com>



Globalcon 2013 / March 6-7, 2013 /Philadelphia, PA

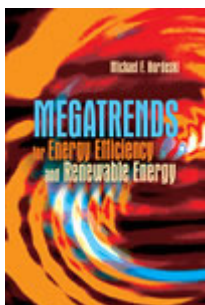
Presented by AEE and hosted by **Philadelphia Gas Works (PGW)**, is designed specifically to facilitate those seeking to expand their knowledge of fast-moving developments in the energy field, explore promising new technologies, compare energy supply options, and learn about innovative and cost-conscious project implementation strategies. The multi-track conference covers a broad range of currently relevant topics, including, but not limited to *HVAC & Smart Building Systems, Renewable & Alternative Energy / Onsite Generation, Lighting Efficiency and Plant & Facilities Management*. Globalcon gives attendees the opportunity to hear first-hand from some of the major players in the energy field. Learn more at <http://www.globalconevent.com>

## FEATURED PROFESSIONAL REFERENCE BOOKS AVAILABLE:



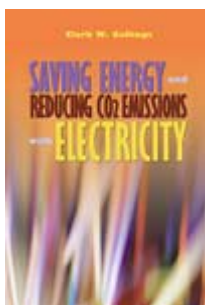
### **SUSTAINABLE DEVELOPMENT HANDBOOK, Second Edition**

Sustainable development is a concept that incorporates energy, urban management, environmental objectives, policy integration, and the idea that effective solutions can be achieved in a cooperative manner with concerted effort. This book is intended to clarify critical issues, proven approaches and potential pitfalls associated with such initiatives, covering underlying concepts, renewable energy solutions, environmental issues, green design and LEED® programs, sustainable industrial processes, sustainable development policy considerations, local government programs, corporate programs, tracking results, and future trends. The 2<sup>nd</sup> edition includes updates on measurement and verification for LEED projects. Full Description [https://www.aeeprograms.com/store/detail.cfm?id=979&category\\_id=6](https://www.aeeprograms.com/store/detail.cfm?id=979&category_id=6)



### **MEGATRENDS FOR ENERGY EFFICIENCY & RENEWABLE ENERGY**

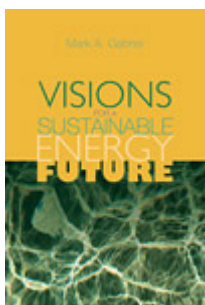
This comprehensive book explores this compelling and complex topic, examining the driving and often competing forces which come into play as we move forward. Currently 85% of the world's energy systems are powered by coal, oil and other fossil fuels. The author provides an overview of the ongoing energy mix evolution, current technology and alternative fuel developments, sustainable building trends, evolving energy efficiency practices, and more. The technical and economic tradeoffs of renewables, as well as planning, siting installation, operation, and safety considerations are covered. A full chapter is devoted to alternative fuel sources and fueling methods. The influence of energy and environmental policy, greenhouse gas restrictions, and the role of the business community are fully discussed. Full description: [https://www.aeeprograms.com/store/detail.cfm?id=1060&category\\_id=6](https://www.aeeprograms.com/store/detail.cfm?id=1060&category_id=6)



### **SAVING ENERGY AND REDUCING CO2 EMISSIONS WITH ELECTRICITY**

In order to sustain society's expectation for comfort, convenience and productivity, it will remain necessary to continue to seek and find reasonable quantities of energy in forms which are accessible, affordable and have modest or zero environmental impacts. This need will lead to increased electrification, and a decrease in - and possible elimination of - the use of fossil fuels. This book will guide the reader toward a clearer vision of that goal, with explanations of the concept of electrification, along with CO2 reductions through expanded end-use applications of electricity. Topics will include electric cars; airport, seaport, railroad and mining electrification; industrial uses of electricity in a variety of processes; residential building use of electricity; enhancing energy efficiency & demand response.

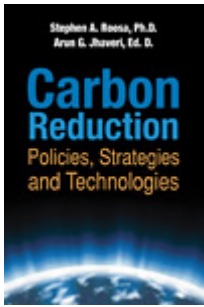
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### **VISIONS FOR A SUSTAINABLE ENERGY FUTURE**

This book offers a unique insight into the corporate health of energy companies in an evolving landscape of deregulation. Cutting across both historical and present-day situations, it demonstrates important elements vital to the success of energy companies coming out of a safe regulated structure, and dealing with a new, competitive environment. Targeted at corporate executives, energy professionals, the financial and investment communities, strategic planners, and regulators, readers will find this resource helpful to understand how energy companies can meet the challenges of a competitive environment.

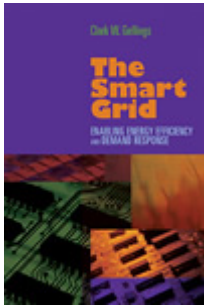
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### **CARBON REDUCTION: POLICIES, STRATEGIES AND TECHNOLOGIES**

In this time of increasingly pressing concern about global climate change and its potentially irreversible and detrimental impacts on the world's population, it is considered urgent to find effective means for significantly reducing local, regional, national and international greenhouse gas emissions in homes, businesses, industries and communities around the planet. This book, first of all, describes in clear, concise and understandable terms the nature and scope of the climate change problem. The authors then combine their considerable expertise to offer specific guidelines for defining and applying the most effective carbon reduction policies, strategies and technologies. Finally, they propose a well-defined blue-print for an action plan, which can be implemented to help control and abate the alarming increases in carbon dioxide and other greenhouse gas emissions.

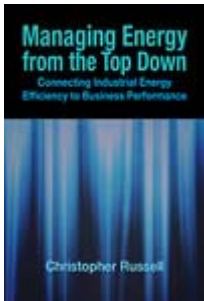
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### **THE SMART GRID: Enabling Energy Efficiency and Demand Response**

The power system has often been cited as the greatest and most complex machine ever built, yet it is predominantly a mechanical system. However, technologies and intelligent systems are now available which can significantly enhance the overall functionality of power distribution, and make it ready to meet the needs the 21st century. This book explains in detail how sensors, communications technologies, computational ability, control, and feedback mechanisms can be effectively combined to create this new, continually adjusting "smart grid" system. You'll gain an understanding of both IntelliGrid<sup>SM</sup> architecture and EnergyPort<sup>SM</sup>, as well as how the integration of intelligent systems can be effectively utilized toward achieving the goals of reliability, cost containment, energy efficiency in power production and delivery, and end-use energy efficiency.

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### **MANAGING ENERGY FROM THE TOP DOWN: Connecting Industrial Energy Efficiency to Business Performance**

Corporate leaders, production managers, machine operators, policy advocates, and technology providers will all learn how day-to-day choices relate to the risks and rewards of energy use. Concise, to-the-point chapters explain how energy is invested, preserved, and ultimately positioned to create wealth. Hard-nosed business leaders should appreciate the section with examples that show a strong financial case for energy improvements, including the save-or-buy criterion, the economic penalty for "doing nothing," the break-even cost, and the budget for supporting design and analysis work. This book is written with the goal of making the challenges and opportunities of energy use accessible to all readers that have a stake in industrial competitiveness.

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