Career Opportunities in ENERGY

Description of the field
The energy industry encompasses a variety of products and services related to the safe and reliable delivery of electricity, natural gas, and oil. It examines issues of energy procurement, capital investment, energy trading, demand forecasting, product development, behavior change, regulatory and policy analysis, and renewable energy technologies. The focus on deregulation and the privatization of energy has increased throughout the world. Multilateral partnerships examining the impact on the environment and sustainable development have resulted in policy recommendations and expanded markets for renewable energy alternatives. There is also growing concern around the relationship between acquiring energy resources, regional conflict and national security.

Professional work in the energy industry involves:
- Analyzing energy policy trends
- Program measurement, evaluation, and verification
- Examining policies and trends impacting energy markets
- Developing, evaluating, and operating energy infrastructure projects
- Marketing energy efficiency programs
- Developing community outreach related to projects or plants
- Assessing environmental and regulatory compliance
- Integrating energy management services
- Advocating new approaches toward energy management, development, and technology
- Understanding natural gas storage, production, and transportation
- Marketing and trading physical and financial energy products including natural gas, power, crude oil, and associated commodities
- Acquiring or developing power plants for the competitive market

Career Paths
Some career paths in the energy field may require an engineering or business background, but many opportunities exist for those with a wider scope of transferable skills, experience, and training. Career paths in regulatory analysis, economic modeling, policy making, and policy research often do not require a technical background, but knowledge of the energy field and an understanding of finance, economics, and the environment regulation can increase competitiveness. Knowledge of particular regions and languages can also be marketable skills in the energy field. Gaining internship experience that is relevant to the area of

QUALIFICATIONS TO ENTER THE FIELD

- Excellent writing skills
- Aptitude for quantitative analysis
- Familiarity with the principles of energy and market regulation
- Background in regulatory economics
- Ability to collect and synthesize information
- Ability to write business plans
- Client management skills
- Understanding of policy process
- Specialized regional knowledge
- Language skills
- Engineering and/or private industry experience is a plus

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interest provides exposure to technical aspects while further developing analytical and communication skills.

**Private Sector**
Many private sector employers, especially large oil and gas companies and investor owned electric utilities, tend to invest in the professional development of employees and promote from within. These firms frequently hire graduates to fill positions in regulatory relations, economic and demand research, law, product and service development, finance, and energy procurement. Depending on the company’s market, which can range from local to global, knowledge of the regional customer segments and regulatory structures can be a very important asset for employers. Willingness to travel can be an advantage, along with gaining specific experience in project or program management is important for long-term career advancement.

**Public and Nonprofit Sectors**
A person entering the public or nonprofit sectors as a research or policy assistant might expect to progress to analyst or technical consultant and eventually into project or program management. The career path within a federal government agency such as the Department of Energy will be similar to other policy positions in the government. Opportunities exist for recent graduates and other entry-level positions in areas such as economic, regulatory, or policy analysis.

In the nonprofit sector, positions focus on general research of energy trends, international energy policy formation, training, and arranging international collaboration between utilities or other energy entities. Due to their relatively small size, all professionals are expected to participate in a wider range of activities than what is true of large for-profit companies, including the occasional administrative task. With larger nonprofits as the exception, advancement often comes from moving to another organization. Experience in one sector can lead to career opportunities in another.

Salaries vary depending on the qualifications needed and the employer. Entry-level salaries range from the upper $40,000s in non-profit organizations, government and research organizations to between $70,000 and $80,000 in engineering firms and consulting companies, with the upper range targeting those with more work experience or technical knowledge. Salary differentials may exist for candidates who have technical or scientific degrees or significant work experience in the field, on Capitol Hill, or in federal agencies.

**Sample Employers**

**Private Sector**
- AES – aes.com
- BP – bp.com
- Chevron Corporation – chevron.com
- Con Edison (New York) – coned.com

**DEMAND**

+ The demand continues for candidates with business backgrounds as a result of consumer utility industry deregulation, advancements in alternative energy sources, and a growing demand for current sources of energy from developing countries. Graduates can still find growing opportunities in marketing, management, and planning positions. Other opportunities exist in consulting companies which typically advise foreign governments on establishing regulation, planning for transmission, and restructuring distribution companies.

+ Though private sector employers have tended to hire graduates with engineering or technical backgrounds, opportunities exist for graduates with regional expertise, language abilities, policy analysis, marketing, public affairs, and business development. Openings can also arise in strategic planning or external relations departments for candidates with congressional or federal experience. In research and consulting organizations that serve the federal government, there is some demand for science and technology specialists, especially for those with expertise in alternative energy and technology transfer.

+ Environmental impact and increased attention to energy conservation provide opportunities for graduates interested in technology and policy issues.
o DNV GL – dnvgl.com
o Duke Energy – duke-energy.com
o Energy Security Analysis Inc. – esai.com
o Evolution Markets – evomarkets.com
o Exelon Corporation – exeloncorp.com
o Exxon Mobil – exxonmobil.com
o Nexant Energy Consulting – nexant.com
o Nuclear Research and Consultancy Group – nrg.eu
o PA Consulting Group – paconсалing.com
o PACE Global Energy Services – paceglobal.com
o Pacific Gas & Electric Company – pge.com
o Pepco (Washington, D.C) – pepco.com
o Southern California Edison – sce.com
o Shell Energy – shell.com

Nonprofit Organizations
o FHI 360 – fhi360.org
o Alliance to Save Energy – ase.org
o American Gas Association – aga.org
o American Wind Energy Association – awea.org
o Business Council for Sustainable Energy – bcse.org
o Edison Electric Institute – eei.org
o Environmental Defense Fund – edf.org
o Institute of International Education – iie.org
o Natural Resources Defense Council – nrdc.org
o US Energy Association – usea.org
o Winrock International – winrock.org

Government
o House Committee on Energy and Commerce – energycommerce.house.gov
o State Utility Commissions – usa.gov
o USAID – usaid.gov/what-we-do/economic-growth-and-trade
o US Department of Energy – energy.gov
o US Environmental Protection Agency – epa.gov

Resources for Additional Information

Energy Associations
o American Petroleum Institute – api.org
o CSR – linkedin.com/grp/home?gid=59299
o American Petroleum Institute – epri.com
o American Wind Energy Association – awea.org
o Electric Power Research Institute – epri.com
o FuelsEurope – fuelseurope.eu
o International Hydropower Association – hydropower.org
o International Petroleum Industry Environmental Conservation Association (IPIECA) – ipieca.org
o Nuclear Energy Institute – nei.org
Internet Resources

- US Energy Association – usea.org
- Energy Careers – energycareers.com
- Environmental Career Opportunities – ecojobs.com
- European Commission on Energy Research – ec.europa.eu
- International Association for Energy Economics – iae.org
- International Emissions Trading Association – ieta.org
- International Energy Agency – iea.org
- PowerMarketers – powermarketers.com/pmajobs.htm
- Sustainable Business – sustainablebusiness.com
- World Bank Energy Sector Management Assistance Program – esmap.org
- Wellspring Advisor – wellspringadvisors.com

LinkedIn Groups

- Linked:Energy (Energy industry expertise) – linkedin.com/groups/62696/profile
- Renewable Energy Network – linkedin.com/groups/1894339/profile

Publications

- Plunkett’s Energy Industry Almanac (Published Annually), Plunkett Research, Ltd.