

LEED CERTIFIED BUILDINGS. LEED ACCREDITED PROFESSIONALS.



MAY 2018 TECH BRIEF FOR CONSTRUCTION AND UTILITIES TALENT NETWORKS

Leadership in Energy and Environmental Design

LEED is an internationally recognized green building certification system. It offers third-party verification that a building or a community was designed and built using strategies aimed at reducing energy and water usage, promoting better indoor air quality and providing by example, an education about sustainable living.

The US Green Building Council ([USGBC](#)), a not-for-profit corporation, maintains a point-based system for rating how well a construction project minimizes its environmental impact and the efficiency of the building in operation. Based on ratings earned, the building is awarded a certification: green, silver, gold or platinum.

Accreditation is recommended for those in construction and utilities. Professionals study, train and take a series of tests to be accredited in one or more aspects of sustainable buildings: operations + maintenance, neighborhood development, schools, etc.

Labor Force Takeaway

The credential *Leadership in Energy and Environmental Design Accredited Professional* or *LEED AP* is a professional credential worthy of the State's list of Industry Valued Credentials. On the way to achieving the LEED AP is the *LEED Green Associate* credential. Green Associate is arguably more practical in the construction and utility field, than is the LEED AP, which was developed primarily for architects and city planners.

Furthermore, credentials from USGBC are only a subset of credentials in the "green jobs" sector. Green Business Certification Inc ([GBCI](#)) handles both certification of things and credentialing of people for USGBC and others. Among the credentials GBCI administers are: Performance Excellence in Energy Renewal ([PEER](#)) for electric utilities; [WELL](#) which counters "sick building syndrome"; [Parksmart](#) which rewards high-performing, sustainable garages and promotes smart parking technology; and [True](#) Zero Waste, which optimizes the waste stream.

LEED AP is the best known Green Job credential, but not the only one, nor necessarily the most cost effective.

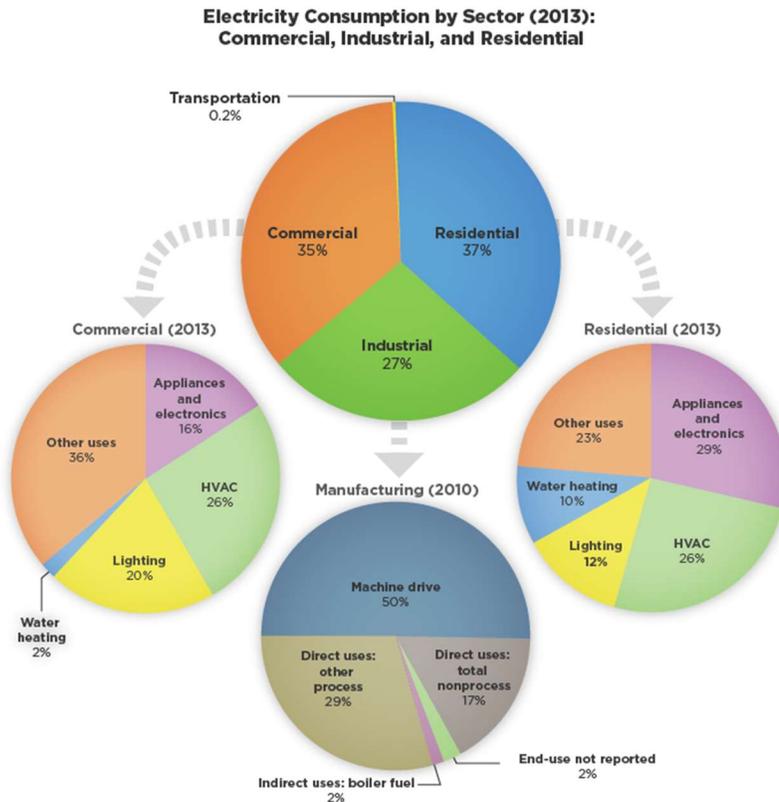


Figure 1 Power Consumption - source EPA archives

In the US, buildings account for ~40% of electric power demand and ~\$14 of potable water consumption. This data is from older EPA figures, and although technological adaptations of buildings is relatively slow, these number are likely accurate enough for discussion purposes. Figure 1 shows the downstream uses for power, most of which are tied to buildings, especially residential.

NJ imports a small amount of electricity to meet demand. As more 24/7 technology is used (e.g. Alexa and Nest) demand can be expected to rise. Electricity costs are currently low, yet few economists expect that to be true forever. Potable water costs are also expected to rise.

Therefore, it is understandable that building owners would be looking to optimize the resources used as a hedge against price volatility if nothing else.

This is the impetus for USGBC, Building Performance Institute (BPI) and EPA as well as other public-private partnerships to agree on standardized ways to measure the efficiency and environmental effectiveness of buildings.

Currently, NJ DOL recognizes credentials from BPI and EPA but not from GBCI. Whether one or more of the LEED AP credentials or PEER for electric utilities should be included on the list can be debated. The argument *against* having them on the list is that these credentials are relatively expensive and specialized. Even the LEED [Green Associate](#) (GA) and some of the other less expensive LEED credentials may not necessarily lead directly to jobs.

USGBC credentials are more comprehensive than BPI credentials. For example, they cover potable water use. This is similar to EPA's Water Sense program. The PEER credential has no analogous credential on the IVC list.

That said, the material covered in LEED and PEER credential programs deserves to be part of any apprenticeship or upskilling curriculum that CUTN/TDC puts together. Only the point systems used are proprietary. The vast majority of the content is publicly available. For example, the atmospheric chemistry that drives climate change was [studied by NASA](#) to understand the climate of outer planets. Ecologists began to use the atmospheric chemistry models to explain changes on earth. Much of the other content originates from EPA or DOE's [National Renewable Energy Lab](#).

Full disclosure: The author of this Tech Brief holds a LEED AP credential in Building Design and Construction.