What is LEED?
Leadership in Energy and Environmental Design (LEED) is a voluntary national rating system for developing “green” sustainable buildings. Developed by the nonprofit U.S. Green Building Council, LEED outlines state-of-the-art strategies for all types of buildings, including schools, homes and retail stores. It emphasizes sustainable site development, water savings, energy efficiency, materials and resources selection, and indoor environmental quality.

What is a LEED certification?
LEED is a third-party certification system that measures a project’s green features and verifies that a building is operating according to those standards. There are four levels of certification – Certified, Silver, Gold and Platinum.

About CAES and LEED:
• When it put the Center for Advanced Energy Studies building out to bid, the state of Idaho required it be designed and built to at least LEED Silver standards. CAES’ integrated design exceeds those standards and actually places it between Gold and Platinum, the two highest ratings. That was done without going over budget.
• CAES is registered for LEED certification and plans to certify at the Gold level. To get that designation, CAES had to meet standards in six categories and then was awarded points based on how many of those criteria it met. Here is how the 55,000-square-foot building scored:
  - Sustainable Sites: 11 out of 15 = 73 percent
  - Water Efficiency: 4 out of 5 = 80 percent
  - Energy and Atmosphere: 9 out of 14 = 64 percent
  - Materials and Resources: 4 out of 11 = 36 percent
  - Indoor Environmental Quality: 10 out of 11 = 91 percent
  - Innovation and Design Process: 5 out of 5 = 100 percent

Ninety percent of all occupants have an exterior view that provides abundant daylight.
CAES consumes 38 percent less energy than is allowed by American Society of Heating, Refrigerating and Air-Conditioning Engineers code.
The furniture and seating in CAES is Greenguard Indoor Air Quality Certified.
A handful of buildings in Idaho are LEED certified and all are located in the Boise and Hailey areas. Banner Bank in Boise is the only one with Platinum certification. CAES is one of the few buildings in eastern Idaho built to LEED standards.

**How CAES meets LEED standards:**

- **Stormwater** has been carefully controlled. Because of CAES’ proximity to the Snake River, it was imperative to eliminate any potential contamination. Stormwater is sheet drained from the site’s hardscape surfaces into bioswales that naturally clean the water and let it percolate into the ground. CAES is not connected to the city of Idaho Falls’ stormwater system.

- The building’s **exterior light fixtures** are designed to eliminate all light trespass beyond the property line. Up-lights and other fixtures that can create light pollution were not used at CAES. Its lights are designed to preserve access to the nighttime sky and natural nocturnal environments.

- No potable water is used for **irrigation**. This was accomplished by planting native, drought-tolerant vegetation and using gray water from the HVAC system to irrigate.

- CAES actually uses two separate irrigation systems.
  - The first supplies water to 93 percent of the total landscape area and will be abandoned after about a year when the plants are established.
  - The second is a drip irrigation system that provides water to the remaining 7 percent of planting areas. It is designed to use the 200-gallon wastewater flush from the building’s evaporative cooling system. This wastewater is captured, filtered and stored in a vault prior to irrigation.

- The **furniture and seating** in CAES is Greenguard Indoor Air Quality Certified. That means it does not emit dangerous chemicals like VOCs and formaldehyde.

- **Recycled materials** were used extensively throughout CAES. For example, its structural system was built primarily with recycled steel.

- The building incorporates not only recycled material and “green” construction elements, but it also is designed to create a **good work environment** for employees. It achieved 91 percent of the Indoor Environmental Quality category points by:
  - Installing HVAC systems that allow an occupant to control his or her environment while delivering clean, fresh air to each space.
  - Using materials that have little or no VOCs or emit off-gases.
  - Ensuring all potentially harmful chemical sources in the building, from laboratories to janitors’ closets, are vented to the outside to avoid contamination.
  - Providing abundant daylight and exterior views to work stations throughout the building. Ninety percent of all occupants have an exterior view.

**What these features mean:**

- CAES consumes 38 percent less energy than is allowed by American Society of Heating, Refrigerating and Air-Conditioning Engineers code. According to a robust building simulation model, this efficiency reduces **electricity costs** by 32.3 percent and **natural gas** costs by 47.8 percent. The total dollar savings are expected to be nearly $68,000 per year.

- Through the use of dual-flush toilets and water-efficient urinals, faucets and showerheads, CAES uses 45 percent less water than a similarly sized office building.