

## Sustainability and LEED Certification

Science laboratory facilities developed at an academic institution which exalts environmental stewardship must be designed, constructed and operated in a way that supports sustainability and which reduces the facility's impact on environmental and institutional resources.

The LEED (Leadership in Energy and Environmental Design) facility certification program outlines the characteristics of sustainability (<http://www.usgbc.org/DisplayPage.aspx?CMSPageID=64&>). LEED certified buildings:

- are leading the transformation of the built environment
- are built as designed and perform as expected
- have lower operating costs and increased asset value
- are healthy and comfortable for their occupants
- reduce waste sent to landfills
- conserve energy and water
- reduce harmful greenhouse gas emissions
- qualify for taxes, rebates, zoning allowances, and other incentives in hundreds of cities
- demonstrate an owner's commitment to environmental stewardship and social responsibility

Facilities which support sustainability can be developed with and without LEED certification. For an institution which competes with peer institutions for students, certification may provide a competitive advantage. The cost of LEED certification includes direct certification costs that are estimated to be in the range of \$50,000 to \$70,000, the costs of engineering analysis to support LEED requirements, the additional construction costs necessary to reduce environmental impacts, and the additional costs of more efficient facility systems. It was indicated that additional costs generally range from 2% to 6%, depending on the LEED certification level; however, these costs were recovered in 2 to 5 years as a result of more efficient facility operations.

It was suggested that certification, which is expected to provide an operational payback, i.e., return on investment (ROI), might be funded by a deferred payment mechanism.

PKAL offered an interesting warning that many college's who have not gotten their science buildings LEED certified have often been very embarrassed later by trustees, students, and parents, who want to know why the college was not a "good steward" by doing so; thus, LEED certification is a challenging, but perhaps very important, consideration.