Green Building Design & Commissioning Program

GOAL:

Adoption of energy efficiency and renewable energy as best practice for construction, rehabilitation and operation of high performance public use "green" buildings meeting or exceeding nationally accepted benchmarks by Illinois governments and non-profit organizations.

2009 PROGRAM STRUCTURE:

Eligible facilities:

Buildings in Illinois owned and operated by tax-exempt federally recognized 501 C 3 not-for-profit organizations or local or state government entities.

Eligible work for funding:

Incremental design and commissioning work to support building enhancements to buildings that achieve measurable energy savings directly related to:

a) architectural and engineering work to enhance energy performance in new construction or major rehabilitation projects to improve building design energy performance rating by a minimum of 20% compared to the baseline performance rating required by the Illinois Commercial Energy Code, with the goal of meeting the highest performance standards possible set forth by the U.S. Green Building Council's (USGBC) Leadership in Energy and Environmental Design (LEED) program.

This may include costs of energy responsive site design, computer simulation, energy modeling, technology assessment, value engineering as related to energy efficient building envelope, lighting and mechanical systems and renewable energy use.

Ineligible "green" design measures include those related to landscaping, land conservation, green houses, recycling, and water management.

b) fundamental and enhanced building commissioning:

1. needed to assure building operation plus;
2. necessary to verify and document that the building's energy related systems are installed, calibrated, and perform in accordance with the owner's design intent and occupant needs while reducing energy use and cost; and
3. required to obtain LEED certification

Ineligible building commissioning work includes: 1) commissioning related to equipment replacement below top energy efficiency rating levels, e.g., package roof top HVAC units or furnaces; 2) purchase of electronic monitoring equipment or building automation control systems to support continuous commissioning; and 3) any work generally covered by standard industry installation and maintenance service agreement.

Building project performance:

Building projects must be registered with USGBC with the intent to seek building certification at the proposed level. LEED is the nationally accepted benchmark for the design, construction and operation of high performance green buildings. LEED certification provides independent, third-party verification that a building project meets the highest green building and performance measures.

For New Construction Projects - all LEED for New Construction projects must follow the most current rating system: presently Version 2.2. The LEED for New Construction Rating System is designed to guide and distinguish high-performance commercial and institutional projects, including office buildings, high-rise residential buildings, government buildings, and recreational facilities.

For Building Projects with Specific LEED Rating Systems – USGBC is developing specific rating systems for certain types of buildings as a result of market demand. Where such a system comes into place, it would be the guide applied to a proposed project.

LEED for Schools. The first such USGBC guide is LEED for Schools. This means that LEED for New Construction can no longer be used to certify K-12 school building projects. The LEED for Schools Rating System recognizes the unique nature of the design and construction of K-12 schools. USGBC recommends using – but does not require - LEED for Schools for Early Education, Daycare, and Higher Education facilities.

Grant awards:

Grant awards will be tiered and based on the overall level of energy performance of the building project.

For projects targeting LEED Silver–

New Construction Silver standards (i.e., projects capable of achieving a minimum of 33 LEED points) and

LEED for Schools Silver standards (i.e., projects capable of achieving a minimum of 37 LEED points)

a preponderance of points from the *Energy and Atmosphere* category and performance related criteria within the *Indoor Air Quality* category, provided that a building energy performance rating be 20% or more above the baseline performance rating required by the Illinois Commercial Energy Code, as demonstrated by whole building project simulation using an industry accepted tool such as U.S. Department of Energy COMCheck.

Grants up to $75,000 will be awarded for the incremental design and commissioning costs of including energy efficiency and renewable energy measures in the design of a new or substantially rehabilitated building. Not less than $25,000 of the grant award is to be directed towards building commissioning.

For projects targeting LEED gold or above –

New Construction Gold or Platinum standards (i.e., projects capable of achieving a minimum of 39 LEED points) and

LEED For Schools Gold or Platinum standards (i.e., projects capable of achieving a minimum of 44 LEED points)

a preponderance of points from the *Energy and Atmosphere* category and performance related criteria within the *Indoor Air Quality* category, provided that a building energy performance rating be 25% or more above the baseline performance rating required by the Illinois Commercial Energy Code, as demonstrated by whole building project simulation using an industry accepted tool such as U.S. Department of Energy COMCheck.

Grants up to $150,000 will be awarded for the incremental design and commissioning costs of including energy efficiency and renewable energy measures in the design of a new or substantially rehabilitated building. Not less than $40,000 of the grant award is to be directed towards building commissioning.

Grant Payment Conditions:

Grantees must provide evidence of project registration with the USGBC.

For all projects, a grant payment schedule is established with partial payments of the grant made upon the grantee's reaching specific successive benchmarks of project progress.

A "claw-back" clause would allow the Foundation to seek repayment of its grant if the project is not built or is built without the designed efficiency and renewable elements.

An 18 month deadline by which time final construction documents must be completed or the grant will be canceled.

For those projects targeting Gold or higher certification levels, a final payment of $25,000 will be withheld pending a final certification decision from USGBC.

INFORMATION TO SUBMIT IN AN ENERGY EFFICIENT BUILDING DESIGN AND COMMISSIONING GRANT PROPOSAL

1. **Eligibility of Applicant:** Certify that the grant applicant is a unit of government or provide documentation of its non-profit, federal tax-exempt status under Section 501 (c)(3) of the Internal Revenue Code, but not as a private foundation under Section 509(a) of the Internal Revenue Code.

2. **Eligibility of Facility:** Certify that the facility to be designed and commissioned is owned by the grant applicant, located in Illinois, and used primarily or entirely by the applicant for its tax exempt purpose.

3. **Documentation of Basis for Incremental Design and Commissioning Costs**: Provide a detailed itemized budget that lists the eligible line item design and commissioning costs to enhance project energy performance and achieve LEED certification. This should include a summary of the energy efficiency and renewable energy features and strategies to be included in the overall building design or engineering plan. Please also provide a brief narrative description of the integrated design process planned in order to optimize the building's energy performance.

4. **Architectural/Engineering/Consultant Design Team Experience:** Provide a summary of past team history in designing "green" LEED registered and/or certified building projects. If renewable energy systems such as solar photovoltaics, solar thermal or wind turbines are included in the design, provide a summary of team experience in designing and managing the installation of such systems.

5. **Certification that Design and Engineering Features Exceed International Energy Conservation Code Requirements**: Demonstrate that proposed design and engineering features would exceed prescriptive requirements of the Illinois Commercial Energy Code by submitting the results of a U.S. Department of Energy COMCheck EZ Software report for building envelope and lighting design.

6. **Renewable Energy Systems**: If the applicant is considering integration of renewable energy systems in building design, the following information should be provided:

    a. Type and size of the proposed renewable energy system(s) and how it (they) will be integrated into the building or site;
    b. Rated capacity and anticipated output (kWh or BTU) of the proposed renewable energy system(s);
    c. Purpose of the installation and what building load(s) will be met;
    d. Estimated cost savings – energy cost savings plus operation/maintenance savings if known;
    e. Estimated up-front costs of the proposed renewable energy system(s) - if possible provide a breakdown between labor/installation and equipment costs;
    f. Identify whether specific building systems were resized to accommodate the use of renewable energy and quantify the associated cost(s);

7. **LEED Pre-Certification Estimate of Points:** Demonstrate that proposed design and engineering features meet LEED certification requirements by submitting the appropriate LEED pre-certification form.

8. **Estimate of Incremental Energy Savings and Other Benefits Resulting from Inclusion of Green Measures:** Provide an estimate of the incremental energy savings (kW and/or kWh) through efficiency measures or renewable energy systems, as well as other benefits such as emissions reduction, resized mechanical systems and operational savings, resulting from the implementation of the proposed measures.

9. **Documentation of Incremental Construction Cost**: Provide estimates as to whether inclusion of each energy efficiency and renewable energy feature is expected to result in incremental increases to construction costs.

10. **Building Commissioning Plan:** Demonstrate the benefits by estimating operational cost savings from implementation of basic and enhanced building commissioning processes. Plans to establish ongoing monitoring systems and operation protocols for the continued optimal operation of the building project should also be included.

11. **Evidence that Project Financing is in Place:** Provide a reasonable assurance that project financing is/will be in place to complete construction. Such evidence shall include, e.g., passage of local bond referenda, receipt of state/federal/local grants, cash-in-hand, or capital fundraising program.

12. **Commitment to Education:** Provide a statement of the expected outcome and benefits to the community/applicant as a result of this project. Preference will be given to projects that demonstrate a commitment to educate members of their community about their energy efficient green building.

    Preference will be given for both design and commissioning grants to types of facilities common in Illinois such that results of the energy efficient design and/or commissioning process could inform other building owners. Applicants must have a plan to widely share the results of the design and commissioning process with others in Illinois with similar buildings.

    For building commissioning, grant applicants should document whether any training materials and procedures will be developed during the commissioning process. A description of how these materials will be used on an ongoing basis should be included.