



Baltimore Energy Initiative Loan Program

Program Guidelines and Instructions



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www.EnergyLoansBEI.org

Baltimore Energy Initiative Loan Program

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PART 1. OVERVIEW

A. Introduction

This document provides instructions and other important information about the Baltimore Energy Initiative Loan Program (“**BEI Loan Program**”). The BEI Loan Program will provide low-interest loans to Baltimore non-profits and for-profit small businesses to help them implement building energy improvements in their facilities.



Funding for the BEI Loan Program is provided by the City of Baltimore using some of the Customer Investment Funds it received from the Maryland Public Service Commission in the utility merger of Baltimore Gas & Electric Company and Exelon. These funds, which the City will receive over a period of three years, are for delivering energy efficiency and energy assistant services to organizations that serve low-income families and communities within Baltimore City.

The BEI Loan Program is managed by the Baltimore City Energy Office and the lending is originated and serviced by Healthy Neighborhoods Inc. (“**HNI**”) and The Reinvestment Fund (“**TRF**”). To learn more about these two organizations, please visit www.healthyneighborhoods.org and www.trfund.com.

B. Eligible Borrowers

The BEI Loan Program provides loans to non-profit organizations and for-profit businesses. Individual home owners are not eligible for this loan program.

The entities that are eligible for financing under the BEI Loan Program are divided into two tiers:

1) Tier 1 Borrowers

- **Non-profit organizations** which provide at least 50% of their services to low-income persons.
- **For-profit small businesses** that own or have a long term lease on their space located in either:
 - (a) a New Markets Tax Credit eligible census tract; or
 - (b) a Baltimore Main Streets District.

2) Tier 2 Borrowers

- **Real estate project developers** (either non-profit or for-profit small businesses) of properties and projects located in either:

(a) a New Markets Tax Credit eligible census tract; or

(b) a Baltimore Main Streets District

AND that:

(a) provide new neighborhood amenities;

(b) remove blight; or

(c) provide 50% of their housing to residents with incomes of 80 percent of the area median income or below.

Definitions

Low-income is defined as family income 80% or less of the median family income for the Baltimore metropolitan area. In 2014, that income level is \$53,576 or less. This number changes, so applicants are urged to check with the BEI Loan Program website for updated figures.

Small businesses are defined by the U.S. Small Business Administration as businesses having a tangible net worth less than \$15 million and an average net income less than \$5 million after taxes for the preceding two years.

A **New Markets Tax Credit eligible census tract** is a low-income community designated by the Community Development Financial Institution Fund as eligible for the federal New Markets Tax Credit Program (see www.cdfifund.gov/what_we_do/programs_id.asp?programID=5). This federal tax program was created in 2000 to spur investment in businesses and real estate projects located in low-income communities by providing federal tax credits for individual and corporate investors for eligible projects.

A **Baltimore Main Streets District** is one of nine neighborhoods in Baltimore that are part of the Baltimore Main Streets Program, a neighborhood revitalization program managed by the Baltimore Development Corporation (see www.baltimoredevelopment.com/for-businesses/affiliate-ventures/main-streets/).

The BEI Loan Program Website Mapping Tool

The BEI Loan Program website can help you determine if your project is in a New Market Tax Credit census tract or in a Baltimore Main Streets District. Just go to the website and type in the address of the building and you will be given a color-coded map showing the boundaries of these areas in the City.

C. Eligible Building Projects

The Four Categories of Eligible Building Energy Projects

The BEI Loan Program will provide financing for four categories of building energy projects:

1. Limited energy retrofit measures in an existing, occupied building.

This category includes the replacement of a piece of energy equipment (*i.e.* replacing a boiler or furnace) or a single energy system (*i.e.* upgrading the lights or the HVAC system). Energy analysis must predict at least a 15% efficiency improvement over the existing system or equipment.

2. Extensive whole-building energy retrofit measures in an existing building.

This category is for a comprehensive energy project where the building owner installs a number of different energy measures to improve the whole building's energy use. An energy audit is required to predict at least a 15% reduction of whole-building historical energy usage.

3. Energy measures in Gut Rehab projects.

A gut rehab is when an existing building is stripped to its walls and floors and extensively renovated, with new electrical, mechanical and other systems. There are different energy standards for low-rise (one to three stories) residential buildings and for all other commercial buildings. **PART 4** of this document (pp. 12-17 below) provides additional information about the energy baseline and the energy analysis needed to support the claimed energy savings for each of the different types of projects.

- Low-Rise Residential (1-3 Stories): Project must meet the energy efficiency standard of the *International Residential Code for One- and Two-Family Dwellings (2012 Edition)*.
- All Other Buildings: Project must meet the *International Green Construction Code (2012 Edition)*.

4. Energy measures in New Construction projects.

The energy savings requirements for new construction projects differ for the type of borrower (Tier 1 non-profit organizations and small for-profit businesses or Tier 2 for-profit real estate developers) and the type of building (low-rise residential or all other commercial buildings). **PART 4** of this document (pp. 11-16 below) provides additional information about the energy baseline and the energy analysis needed to support the claimed energy savings for each of the different types of projects.

Tier 1 Borrowers:

- Low-Rise Residential (1-3 Stories): Project must meet the *International Residential Code for One- and Two-Family Dwellings (2012 Edition)* and energy modeling must show the project's estimated energy consumption will be at least 10% lower than permitted under the *International Residential Code for One- and Two-Family Dwellings (2012 Edition)*.
- All Other Buildings: Project must meet the *International Green Construction Code (2012 Edition)* and energy modeling must show the project's estimated energy consumption will be at least 10% lower than permitted under the *International Green Construction Code (2012 Edition)*.

Tier 2 Borrowers:

- Low-Rise Residential (1-3 Stories): Project must meet the *International Residential Code for One- and Two-Family Dwellings (2012 Edition)* and energy modeling must show the project's estimated energy consumption will be at least 15% lower than permitted under the *International Residential Code for One- and Two-Family Dwellings (2012 Edition)*.
- All Other Buildings: Project must meet the *International Green Construction Code (2012 Edition)* and energy modeling must show the project's estimated energy consumption will be at least 15% lower than permitted under the *International Green Construction Code (2012 Edition)*.

Examples of Eligible Energy Measures

BEI energy loans can be used to finance a wide range of building energy measures, including insulation, windows, HVAC systems and controls, lighting fixtures and controls, domestic hot water heaters, low-flow plumbing fixtures, ENERGY STAR appliances and office equipment and distributed generation systems such as solar photovoltaic systems and combined heat-and-power systems. A list of eligible measures is shown on a table on page 14 of this document.

Financing for Non-Energy Improvements

BEI energy loans are limited to financing energy measures, but non-profit organizations may use up to 20% of the loan amount, not to exceed \$50,000, to correct health, safety, aesthetic and other issues associated with energy upgrades.

D. Loan Terms

Loans by the BEI Loan Program may vary depending on the size of the loan and the specifics of each Applicant and each project. In the following table of general loan terms, "small loans" are loans less than \$150,000 and "large loans" are loans \$150,000 and larger.

Loan Amount:	Up to \$2 million. Borrowers can borrow a maximum of 90% of the cost of the energy project
Interest Rate:	3.0% fixed for small loans - 4.0% fixed for large loans.
Term:	Up to 15 years.
Loan Application Fee:	\$250 for small loans - \$100 for large loans
Loan Origination Fee:	2% for small loans - 1% for large loans.
Closing costs:	Borrower is responsible for all closing costs, including legal, filing and construction inspections.
Loan Servicing Fee:	0.37% of monthly payment for small loans - none for large loans.
Collateral:	First or second position mortgage lien.

Other Regulatory Requirements

Because the capital for the BEI Loan Program is from the City of Baltimore, several City contracting requirements will apply to all BEI energy loans. These will be addressed in the loan documents, but the two most significant requirements are the provisions regarding non-discrimination and insurance, which are addressed in **PART 5** of this document (page 17).

E. The Lending Process

Every energy project and energy loan presents its own unique issues, but in general, loan applicants and BEI Loan Program staff will go through the following steps in applying for, underwriting, approving, closing, disbursing and paying a loan:

- Step 1 Review this *Guidelines* document and the other documents on the website – www.EnergyLoansBEI.org – before completing and submitting any paperwork.
- Step 2 Complete the *Initial Financing Request Form*. Instructions for obtaining and completing this two-page form are in **PART 2** of this *Guidelines* document (pp. 7-9). Applicants are not expected to wait until every aspect of a project has been decided before filing the *Initial Financing Request Form*.
- Step 3 Meet with BEI Loan Program staff. We will review the *Initial Financing Request Form* you submitted in Step 2 and then meet with you to discuss if a BEI loan makes sense for your project, and if your project is eligible for a BEI Loan Program energy loan. If it does, you will be asked to proceed to Step 4. At this point we will also decide if your project needs a small loan (less than \$150,000) or a large loan (\$150,000 and above). This will determine whether your loan request will be underwritten by Healthy Neighborhoods Inc. (for the small loans) or The Reinvestment Fund (for the large loans). They will provide you with the proper *Building Energy Loan Application Form* for your project.
- Step 4 Complete the proper *Building Energy Loan Application Form* based on the size of your energy project and loan request. In addition to completing the loan application form, an Applicant must submit a number of exhibits listed on the loan form. Instructions for completing the *Building Energy Loan Application Form* are included in the form, but **PART 3** of these *Guidelines* (pp. 10-11) provides a preview of the form and its exhibits.
- Step 5 Loan Underwriting. When the *Building Energy Loan Application Form* is received, the underwriting process begins. As described in **PART 3** of these *Guidelines* (pp. 10-11), the due diligence review of applications has two main tracks – financial and energy. In the financial underwriting, we are looking at the financial health of the Applicant and the ability of the Applicant to repay the loan. In the energy review (described in **PART 4** of these *Guidelines*, pp. 12-17), we are looking to confirm that the proposed project will meet the energy savings goals of the program. During the underwriting process, program staff may request additional or clarifying information from the Applicant as needed. It is also during underwriting that staff will work with the Applicant to determine what security will be used to secure the loan and help Applicant satisfy the other program requirements.

- Step 6 Loan Approval. Once we have determined that the Applicant is a good credit, the proposed project makes sense and meets the energy savings goals, we will approve the loan and send the Applicant an offer letter describing the full terms of the proposed loan. The offer letter is not the final loan, but is an important step that confirms the loan will be forthcoming.
- Step 7 Loan Closing. Commercial loans require several legal documents that must be prepared and executed before the loan is closed. Applicants will receive a loan closing checklist which lists the steps that must be completed before the loan is closed. These include obtaining whatever security is needed (a first or second position mortgage lien, performance bonds, loan guarantees or other tools to secure the loan) and completing the needed regulatory steps (such as applying for a Baltimore Gas & Electric Energy Solutions rebate and determining the non-discrimination goal for the project). When these steps have been completed, the loan documents will be signed and the loan will be closed.
- Step 8 Construction. Once the loan has closed, the Borrower can start its project. Borrowers must use a licensed, insured general contractor with experience in making energy efficient improvements, unless this requirement is waived. For simpler projects, a Borrower may request to self-manage a limited number of licensed contractors. If Borrower is unable to complete the project within the construction period of the Loan, the construction period may be extended at the Lender's discretion. An extension fee may be charged.
- Step 9 Loan Disbursement. If provided for in the loan documents, the Borrower can receive reasonable advances to pay any deposits or other necessary payments to contractors. Loan disbursements will be made during construction upon satisfactory inspection of the work in place by the construction inspector. Customary loan inspection fees will be charged. A retainage of 10% (5% if the contractors have provided performance bonds) will be withheld from payment of each loan draw until the project has been completed and successfully inspected and accepted by the Borrower and the lender.
- Step 10 Loan Payment and Servicing. During the construction period, a Borrower will need to make interest-only payments on the total dollars disbursed. Once construction has finished, the loan is converted to a permanent loan and the Borrower starts making monthly Principal and Interest payments on the loan. Any payment delinquency greater than 60 days or loan default will be reported to the City.
- Step 11 On-going Energy Requirements. Borrowers must participate in energy conservation education for their employees, provided free of charge by the Baltimore Energy Challenge. Borrower must also provide a release to the Recipient for access to the energy bills for the subject property for at least one year prior to the project and 24 months following completion of the project so that the impact of the improvements can be assessed.

F. Questions

The first place to find information about the BEI Loan Program is the program website:

www.EnergyLoansBEI.org

The website has information about the energy loans and the various forms you will need. It also has some important tools such as the widget to confirm that your project is located in an eligible section of the City of Baltimore.

You can also submit any questions you have about the BEI Loan Program to:

Info@EnergyLoansBEI.org

Your email will be automatically forwarded to program staff at the City, The Reinvestment Fund and Healthy Neighborhoods, and the appropriate person will answer your questions.

To speak with one of the program staff, please select one of the following:

For general questions:

Anne Draddy
Baltimore Department of General Services
410.396.1221
Anne.Draddy@baltimorecity.gov

For questions about small projects (costing less than \$150,000):

Rahn Barnes
Healthy Neighborhoods Inc.
410.332.0387 x154
rbarnes@healthyneighborhoods.org

For questions about larger projects (costing \$150,000 or more):

Dana Johnson
The Reinvestment Fund
410.783.1110
dana.johnson@trfund.com

For technical questions about energy measures or the energy savings analysis:

Roger Clark
The Reinvestment Fund
215.574.5814
roger.clark@trfund.com

PART 2. INSTRUCTIONS FOR COMPLETING THE INITIAL FINANCING REQUEST FORM

A. About the *Initial Financing Request Form*

Before an interested person completes the full loan application form, they must first complete and submit the *Baltimore Energy Initiative Loan Program Initial Financing Request Form*. This two-page form is the first step in the process of applying for financing from the BEI Loan Program.

The *Initial Financing Request Form* can be downloaded from the BEI Loan Program website. The form is a Microsoft Word form that can be completed by Applicants. The answer boxes of the form expand to the length of the answer given, so please do not feel limited to answers no longer than the current size of the answer fields. Only the fields for the answers can be edited, as all other parts of the form are locked.

Applicants are asked to complete every field of the application form. If the requested information is not yet known, please enter “Not Yet Known” in the field. If the question does not apply to the project being proposed, please enter “Not Applicable.” Applicants are not expected to wait until every aspect of a project has been decided before filing the *Initial Financing Request Form*. Details about a project are expected to become known over the course of underwriting and the due diligence review of the application and the project.

B. Section-by-Section Instructions for Completing the *Initial Financing Request Form*

Section 1. Contact Information for Person Completing this Application

The first section of the *Initial Financing Request Form* asks for the contact information of the person completing the form. The person completing the form should be someone able to discuss the prospective project.

Section 2. Information about the Applicant

The second section of the *Initial Financing Request Form* collects information about the Applicant.

The “Purpose, Work or Services of Business/Organization” question asks for a brief description of the mission, work and services that you provide.

Non-profit organizations must state whether at least 50% of their services are provided to low-income persons, which is defined as family income 80% or less of the median family income for the Baltimore metropolitan area. In 2014, median family income for Baltimore is \$66,970, so 80% of median is \$53,576 or less a year. That figure changes from time to time, so check the BEI Loan Program website for updated income figures.

For-profit businesses must state whether they meet the U.S. Small Business Administration’s definition of a small business, which is having a tangible net worth less than \$15 million and an average net income less than \$5 million after taxes for the preceding two years.

Section 3. Information about the Proposed Energy Project

Section 3 of the *Initial Financing Request Form* asks for information about the building and proposed energy project. Provide as much information as you know about the building and the project.

To help you answer the questions about whether the project is located in a New Markets Tax Credit eligible census tract or in a Baltimore Main Streets District, please visit the BEI Loan Program website and look for the Geography Button. This is a widget that will ask you to enter the address of your building and then show it on a map with color overlays if the address falls within a NMTC-eligible census tract or a Main Streets District.

Provide a short description about the scope of work under the project.

There are several questions about the status of the energy analysis that is needed to show that the proposed project satisfies the energy savings requirement. Retrofits of existing buildings will use an energy audit or some other engineering analysis, whereas gut rehab or new construction requires a building energy model to estimate future energy use. This analysis is covered in detail in **PART 4** of this document (pp. 12-17).

Section 4. Project Budget

Section 4 of the *Initial Financing Request Form* asks for the budget information for the project. Key categories of project costs are provided. The “Other” cell is for important costs not listed, such as site acquisition or whatever applies to your project.

Please indicate how certain you are about each cost line. This can range from an educated guess to actual contractor bids.

The “Important Comments about the Project Budget” cell is to address any uncertainties or other issues about the budget figures.

Section 5. Energy Loan Request and Other Project Financing

Section 5 of the *Initial Financing Request Form* seeks information about how you plan to pay for the project. Please tell us the size of the energy loan you are seeking from the BEI Loan Program.

The table in this section lists various sources for project financing, including other loans, grants, BGE rebates and your equity (or cash) contribution. The BEI Loan Program **requires** Applicants to apply for the BGE Energy Solutions for Business Program rebate – see www.bgesmartenergy.com/business/energy-solutions-business for more information about this utility program.

The “Other” cell is for important sources not listed, such as a capital campaign or whatever applies to your project. Indicate the source of each piece and the status (i.e. committed, application pending, etc.).

The “Important Comments about the Project Financing” cell is to address any other issues about the status of the project financing.

C. Saving and Submitting the *Initial Financing Request Form*

Once the form has been filled out, save it as a Word document with a file name that includes the project name and the date. The completed *Initial Financing Request Form* should then be emailed to:

LoanRequests@EnergyLoansBEI.org.

As noted in Step 3 on page 7 above, TRF and HNI staff will review the submitted *Initial Financing Request* form and contact its author to discuss the project and its possible financing. TRF and HNI staff will advise when a full loan application should be completed and submitted.

Any questions about the *Initial Financing Request Form* should be submitted via email to:

Info@EnergyLoansBEI.org

The BEI Loan Program will respond to all questions.

PART 3. THE BUILDING ENERGY LOAN APPLICATION FORM AND THE UNDERWRITING PROCESS

A. Introduction

Before an interested person completes the *BEI Loan Program Building Energy Loan Application Form*, they should first complete and submit the *Initial Financing Request* form, as described in **PART 2** of this document. An Applicant should spend the time to complete and file the full *Building Energy Loan Application Form* only after being advised to do so by the BEI Loan Program staff.

As noted in Step 3 of the financing process (see page 5 above), a key issue following the submission of the *Initial Finance Request Form* is the likely size of the proposed project, which will determine whether it is considered a small project (less than \$150,000) that will be underwritten by Healthy Neighborhoods Inc. or a large project (\$150,000 and above) that will be underwritten by The Reinvestment Fund. There are separate Energy Loan Application Forms for small and large projects. The forms are similar, but there are some differences due to the difference in the scope and complexity of the projects being financed. Each application will have its own instructions.

B. Completing the *BEI Loan Program Building Energy Loan Application Form*

The *Building Energy Loan Application Forms* for both the small projects and the large projects look much like the *Initial Financing Request Form*, though additional information is required so the full loan forms are about twice as long.

However, the *Building Energy Loan Application Forms* also require the Applicant to submit a number of exhibits along with the form itself. For the large projects, the exhibits that will be required are:

- Exhibit 1** Business Narrative - Give complete and accurate names of the Applicant and/or the operating entity. Describe the mission, the work and the people served, as well as a brief history. Include copies of state certification papers or your seal.
- Exhibit 2** Project Narrative - Describe the proposed building project and the energy efficiency improvements included in the project. Describe the project team and the status of the project.
- Exhibit 3** Project Budget – Provide a working Excel file that shows both Sources and Uses for the project.
- Exhibit 4** List of Energy Measures Spreadsheet – This is a working Excel file that lists the energy measures which are in the project. This spreadsheet is described in more detail in **PART 4** of these *Guidelines* (pp. 11-16).
- Exhibit 5** Operating pro forma – Provide a working Excel file that shows Applicant’s projected income and expenses for the requested term of the loan.
- Exhibit 6** Current-Year Interim Financial Statements and past three years of Financial Statements (audited if available). If Financial Statements are unaudited, then also include most recent three years of Federal Tax Returns.

The required exhibits will be listed in the *Building Energy Loan Application Form* and described in the loan application instructions. They are listed here so Applicants will have a sense of the elements of the application process.

C. The Underwriting Process

When the *BEI Loan Program Building Energy Loan Application* is received, the underwriting process is just beginning. The due diligence review of applications has two main tracks – financial and energy. This section describes the financial due diligence. **PART 4** (pp.12-17) describes the energy analysis due diligence.

Factors that will be examined during the underwriting process include:

- the Applicant’s creditworthiness and ability to repay the loan;
- the qualifications, experience, and past performance of the Applicant and project team, including the ability to obtain financing and complete building projects; and
- the Applicant’s ability to comply with the program requirements set by the Maryland Public Service Commission and the City of Baltimore (described in **PART 5**, page 17).

To help the BEI Loan Program team evaluate the applications and proposed projects, Applicants may be asked, during the course of the underwriting process, to submit some or all of the following written materials:

- Resumes of Project Team Members (showing contact information, qualifications, and experience) for Project Manager, Architect (submit AIA form), Engineers, General Contractor, consultants, etc. Describe how these members relate to each other.
- Personal Financial Statements of principals owning 20% or more of the company/organization.
- Most recent year Personal Tax Returns of principals.
- Schedule of Aging of Receivables and Payables, up-to-date within 30 days of application filing date.
- List of outstanding obligations, including all lenders, current loan balances or credit limits and monthly payments.
- Appraisal of real estate collateral (as-improved basis).
- For project with Tenants, a description of potential tenants and copies of letters of intent (“LOI”) and leases, as applicable.
- Phase I Environmental Audit (or Phase II if available) of project site.

During the underwriting process, BEI Loan Program staff reserve the right to request additional or clarifying information from the Applicant as needed in the due-diligence review of a loan application and the project. The Applicant will be told which documents are needed. The documents are named here just to help Applicants understand the scope of the underwriting process.

PART 4. GUIDELINES AND REQUIREMENTS FOR QUANTIFYING ENERGY SAVINGS

A. Introduction

As noted earlier, a building project applying for a BEI Loan Program energy loan must demonstrate that it will satisfy the energy savings goal. Each Applicant will need to submit a written energy analysis report prepared by an energy professional and be based on sound engineering principles for analyzing and estimating savings. An “energy professional” is a registered architect, professional engineer, or individual with a current certification by the Building Performance Institute, the Association of Energy Engineers, the U.S. Green Building Council or comparable certification. The contents of those reports depend on the specific type of project. As noted above, the building energy loans are financing building energy projects in four different categories:

- 1) Projects involving limited energy retrofit measures or the replacement of equipment in an existing building.
- 2) Projects involving extensive energy retrofit measures in an existing building.
- 3) Projects involving the gut rehab of an existing building.
- 4) Projects involving new construction.

Each of these categories of projects has a different approach for determining the energy reduction goal and for establishing that the proposed building project meets that goal. The contents of each energy analysis process and report for each project category will be discussed in the following sections.

B. Energy Measures that Can be Financed and the List of Energy Measures Spreadsheet

The BEI Loan Program gives applicants great flexibility in selecting which energy measures to install. Examples of the different building energy measures that are eligible for financing under the BEI Loan Program include:

Building Envelope	Lighting
Air Sealing	Interior and Exterior Lighting Fixtures
Roof Insulation	Lighting Controls
Exterior Wall Insulation	Daylighting Measures
White Roofs	Plumbing
Windows	Domestic Hot Water Heater
Exterior Doors	Water-Consuming Fixtures
HVAC	Plug Loads
Heating Equipment	Kitchen and Laundry Appliances
Cooling Equipment	Office Equipment
Ventilation Equipment	Other Energy Measures
HVAC Distribution	Combined heat-and-power systems
HVAC Controls	Solar PV and solar hot water
Energy Recovery Systems	Energy storage / demand response systems

Other energy measures may be eligible provided the Applicant can support their effectiveness at helping the building reduce its energy use. While the BEI Loan Program is focused primarily on energy efficiency and conservation measures, it may also provide financing for distributed generation such as solar photovoltaic systems and combined-heat-and-power systems when such measures are part of a larger building energy conservation project. Please contact the BEI Loan Program for more information about financing these kinds of measures.

Because BEI energy loans can only be used to finance energy measures, it is important to document the specific energy measures and their installed costs that will be installed with the BEI Loan Program financing. That is the role of the *List of Energy Measures Spreadsheet* that can be downloaded from the BEI Loan Program website. The spreadsheet is an Excel file that lists the common energy measures, but this can be customized for each project.

The spreadsheet also asks for the “Description/ Specifications/Manufacturer/ Model” of each measure. This information is later checked with the construction drawings and energy audit or energy modeling to ensure that everyone is talking about the same product or measure.

As the project is being constructed and the Borrower is requesting a release of funds, the spreadsheet will be used by the project inspector to verify that the proper measures were installed and not changed during the final design process or during construction. The BEI Loan Program needs to ensure that the estimates of energy savings reflect the actual energy measures installed in the project. If there is any change in the equipment or measures, the Applicant may be asked by the BEI Loan Program to update its energy analysis to show the substituted measures still meet the energy savings requirements.

All loan applicants will need to submit the *List of Energy Measures Spreadsheet* as a working Excel file and keep it current throughout the project.

C. Limited Energy Retrofits in an Existing Occupied Building – a 15% Energy Savings Goal

Energy retrofits in existing occupied buildings can occur either when a piece of energy-consuming equipment reaches the end of its useful life or when a building owner decides to take a proactive approach to reducing the energy consumption of a building. In either case, the building owner replaces an existing piece of equipment or energy system with a more energy-efficient model. Examples of energy retrofits covered by this project category could include replacement of HVAC equipment, lighting systems or other building systems. A single retrofit could also be an insulation contractor who does and air sealing treatment and adds insulation in a building’s attic or exterior walls.

The distinction between “limited” energy retrofits and “extensive” energy retrofits (see the next section) is subjective, but generally a limited energy retrofit involves only one (or in some cases two) separate Energy Conservation Measure (“ECMs”) or piece of equipment or energy system.

ENERGY MEASURE	DESCRIPTION / SPECIFICATIONS / MANUFACTURER / MODEL	TOTAL INSTALLED COST
Building Envelope		
Air Sealing		
Roof Insulation		
Exterior Wall Insulation		
Roof		
Windows		
Exterior Doors		
Other Building Envelope		
	Sub-Total	00
HVAC		
Heating Equipment		
Ventilation Equipment		
Cooling Equipment		
HVAC Distribution		
HVAC Control System		
Energy Recovery System		
Other HVAC		
	Sub-Total	00
Lighting		
Interior Lighting Fixtures		
Exterior Lighting Fixtures		
Lighting Controls		
Daylighting Measures		
Other Lighting		
	Sub-Total	00
Plumbing		
Domestic Water Heater		
Plumbing Fixtures		
Other Plumbing		
	Sub-Total	00
Plug Loads		
Kitchen Appliances		
Laundry Appliances		
Office Equipment		
Other Equipment		
	Sub-Total	00
Other Energy Measures		
1.		
2.		
3.		
	Sub-Total	00
Energy Project Soft Costs		
Architectural Design		
Energy Audit or Modeling		
Other Energy Soft Costs		
	Sub-Total	00
GRANT TOTAL		00

Limited energy retrofits qualify for a BEI Loan Program energy loan when the energy consumption on a BTU basis of the new equipment or new system is at least 15% less than the energy consumption of the existing equipment or system. The energy consumption of the entire building need not be reduced by 15%, but only the energy consumption of the energy equipment or system being replaced. For example, if an Applicant is getting a lighting retrofit of the building lights, the total estimated energy use of the new lights needs to be less than the estimated energy use of the old lights.

To demonstrate compliance with the 15% reduction goal, the BEI Loan Program requires an energy professional to perform an energy analysis and submit a written report that addresses the following:

1. The description of the existing equipment/system.
2. The estimated energy consumption of the existing equipment/system.
3. The description of the new proposed equipment/system or retrofit. Cut sheets of the equipment/systems should be included as an attachment to the analysis.
4. The estimated energy consumption of the new equipment/system or retrofit.

The energy professional must, as part of the written analysis, provide a description of and documentation for all tools used to perform energy use and energy savings estimates. Manual calculations should disclose essential data, assumptions, formulas, etc. so that the Technical Reviewer (see Subsection G below) can replicate the calculations based on the data provided. All assumptions and estimates must be clearly identified.

D. Extensive Energy Retrofits in an Existing Building -- a 15% Energy Savings Goal

Extensive or whole-building energy retrofits happen when a building owner gets a building energy audit and then implements a set of recommended ECMs. It is quite common to see lighting, HVAC controls and several other ECMs packaged together into a cost-effective project. Three or more ECMs packaged together are considered an Extensive Energy Retrofit by the BEI Loan Program.

To qualify for a BEI energy loan, an extensive energy retrofit project must reduce the whole-building's energy use on a BTU basis by at least 15%. The baseline is the building's actual energy usage, taken from utility bills for a recent 12 month period. The historical energy usage should be weather-normalized to remove the impact of unusually hot summers or cold winters.

The energy audit must be an ASHRAE Level II audit (or comparable) performed by a Building Performance Institute certified auditor (or comparable). The written audit report must address the following elements:

1. Historic Energy and Water Consumption (in units and cost for the 24 months prior to the audit)
2. Facility Description (size, age, construction type and features as well as building usage and occupancy profiles).
3. Building Envelope – description of the roof, exterior walls, windows, exterior doors and the building's air tightness, U-values and solar reflectance.
4. Systems and Equipment – analysis of the major electrical and mechanical systems in the building, including the loads, hours of operation, proper sizing, current condition, operating efficiencies and expected remaining life.
5. Energy Conservation Measures – for each recommend ECM, provide a description; the life expectancy; the estimated installation cost; the estimated annual and lifetime energy savings and cost savings; an estimate of any rebates, tax credits and other financial incentives available; the simple payback of the ECM and the estimated return on investment of the ECM.

The energy auditor must, as part of the written analysis, provide a description of and documentation for all tools used to perform energy use and energy savings estimates. Manual calculations should disclose essential data, assumptions, formulas, etc. so that the Technical Reviewer (see Subsection G below) can replicate the calculations based on the data provided. All assumptions and estimates must be clearly identified.

E. Energy Measures in the Gut Rehab of an Existing Building – Meet the International Residential Code or the International Green Construction Code

A gut rehab project is a project that involves the complete stripping of a building down to its walls and floors, followed by the rebuilding of the walls and roof and the installation of new HVAC systems, lighting, plumbing, communications and other building systems. There are different energy savings requirements for gut rehab projects depending on the type of building (low-rise residential or all other commercial buildings). The standard is the same for Tier 1 and Tier 2 borrowers.

- Low-Rise Residential (1-3 Stories): A project involving the gut rehab of a low-rise residential building of one to three stories must meet the energy efficiency standard of the *International Residential Code for One- and Two-Family Dwellings (2012 Edition)*.
- All Other Buildings: A project involving the gut rehab of any other commercial building must meet the *International Green Construction Code (2012 Edition)*.

Architects, engineers and energy consultants should be familiar with the *International Residential Code for One- and Two-Family Dwellings (2012 Edition)* and the *International Green Construction Code (2012 Edition)*. One of these energy professionals must prepare a building energy model using a respected and accepted modeling software program (DOE-2.2, EnergyPlus, eQuest, HAP, Trace or a RESNET HERS audit) to estimate the building's total annual energy consumption. The energy performance report from this modeling exercise must show the baseline building's total predicted energy use, when complete, does not exceed the energy consumption standard of either the *International Residential Code for One- and Two-Family Dwellings (2012 Edition)* or the *International Green Construction Code (2012 Edition)*, whichever is applicable to the building type.

F. Energy Measures in New Construction - a 10% or 15% Energy Savings Compared to the International Residential Code or the International Green Construction Code

The BEI Loan Program can finance energy measures in new construction projects provided the new building will meet the energy performance goal. Any addition of conditioned space to an existing building is considered new construction. The energy savings requirements for new construction projects differ for the type of borrower (Tier 1 non-profit organizations and small for-profit businesses or Tier 2 for-profit real estate developers) and the type of building (low-rise residential or all other commercial buildings).

Tier 1 Borrowers:

- New Low-Rise Residential (1-3 Stories): New construction of a low-rise residential building of one to three stories by a Tier 1 Borrower must:
 - meet the *International Residential Code for One- and Two-Family Dwellings (2012 Edition)*; and,
 - energy modeling must show the project's estimated energy consumption will be at least 10% lower than permitted under the *International Residential Code for One- and Two-Family Dwellings (2012 Edition)*.

- All Other New Buildings: New construction of all other commercial buildings must:
 - meet the *International Green Construction Code (2012)*; and,
 - energy modeling must show the project’s estimated energy consumption will be at least 10% lower than permitted under the *International Green Construction Code (2012)*.

Tier 2 Borrowers:

- Low-Rise Residential (1-3 Stories): New construction of a low-rise residential building of one to three stories by a Tier 2 applicant must:
 - meet the *International Residential Code for One- and Two-Family Dwellings (2012 Edition)*; and,
 - energy modeling must show the project’s estimated energy consumption will be at least 15% lower than permitted under the *International Residential Code for One- and Two-Family Dwellings (2012 Edition)*.
- All Other Buildings: New construction of all other commercial buildings must:
 - meet the *International Green Construction Code (2012 Edition)*; and,
 - energy modeling must show the project’s estimated energy consumption will be at least 15% lower than permitted under the *International Green Construction Code (2012 Edition)*.

Architects, engineers and energy consultants should be familiar with the *International Residential Code for One- and Two-Family Dwellings* and the *International Green Construction Code*. One of these energy professionals must prepare a building energy model using a respected and accepted modeling software program (DOE-2.2, EnergyPlus, eQuest, HAP, Trace and RESNET HERS audit) to estimate the building’s total annual energy consumption. The energy performance report from this modeling exercise must show the baseline building’s energy use (in BTUs) if built to either the *International Residential Code for One- and Two-Family Dwellings* (for low-rise residential buildings) or the *International Green Construction Code* (for all other commercial buildings) and the predicted energy use (in BTUs) with the energy systems and measures that will be used in the new construction. The predicted performance for the new construction building must be either 10% or 15% (depending on the Borrower) lower than the applicable code.

G. Technical Review of the Energy Analysis

The BEI Loan Program has contracted with an energy engineering firm to serve as Technical Reviewer. This firm will review the energy audits, energy modeling and other engineering analysis to confirm the energy savings estimates are reasonable. The Technical Reviewer will also review construction documents and specifications to ensure the energy audits, energy modeling and other engineering analysis accurately reflects the project that is to be constructed. Applicants’ energy professionals must cooperate with the Technical Reviewer in answering questions and providing requested information and revisions. Acceptance of the energy savings estimates by the Technical Reviewer is a condition of the loan.

H. Reporting Energy Consumption Data with *Portfolio Manager*

All projects receiving an energy loan from the BEI Loan Program must also use ENERGY STAR’s *Portfolio Manager* to report both the building’s pre-retrofit Energy Performance Rating and an estimated post-retrofit Energy Performance Rating. *Portfolio Manager* is available at www.energystar.gov/istar/pmpam/index.cfm. Applicants for financing must provide the BEI Loan Program permission to access the *Portfolio Manager* account for the building. More information about ENERGY STAR’s energy benchmarking tools and

resources can be found at <http://www.energystar.gov/buildings/about-us/how-can-we-help-you/benchmark-energy-use/use-energy-star-benchmarking-tools>.

Loan recipients will also need to continue to use *Portfolio Manager* report their building's energy consumption data for the first 24 months of building operations following implementation of the energy measures. Post-construction energy consumption data is required because the BEI Loan Program is required by the City to report both the estimated energy savings and the actual energy savings realized by projects after occupancy.

PART 5. OTHER REGULATORY REQUIREMENTS

Because the capital for the BEI Loan Program is from the City of Baltimore, several City contracting requirements will apply to all BEI energy loans. These will be addressed in the loan documents, but the two most significant requirements are:

A. Non-Discrimination

Borrowers and their contractors shall not discriminate on the basis of race, gender, religion, national origin, ethnicity, sexual orientation, gender identity or expression, age, or disability in the solicitation, selection, hiring, or treatment of its employees, contractors, vendors or suppliers. Borrowers shall comply with both (1) the City's Commercial Non-Discrimination Policy (contained in Article 5, Subtitle 29, of the Baltimore City Code as amended) and (2) the City's Minority and Women's Business Enterprise Requirements (Article 5, Subtitle 28 of the Baltimore City Code, as amended). Borrowers are encouraged to use the MBE/WBE Directory available at <http://cityservices.baltimorecity.gov/mwboo/> maintained by the Minority and Women's Business Opportunity Office (410-396-4355).

B. Insurance

Borrowers shall maintain property and casualty insurance (including fire insurance coverage) for the property which is receiving the improvements financed by the BEI loan for the term of the loan. Borrowers shall require their contractors performing work financing by a BEI loan to maintain applicable insurance coverage (*e.g.*, professional liability, errors and omissions insurance; commercial general liability insurance; business automobile insurance; worker's compensation insurance; and builder's risk insurance) to insure the applicable improvements against loss or damage by fire and other hazards, casualties or other contingencies. Borrower and its contractors must inform the City if any required insurance coverage is suspended, voided, canceled, or reduced in coverage or in limits.



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