CLEAN ENERGY FINANCE GUIDE, THIRD EDITION

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Chapter 5.

Basic Concepts for Clean Energy Unsecured Lending and Loan Loss Reserve Funds

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A. Introduction to Loan Loss Reserve Funds (LRFs)

When grantees involve third-party commercial lenders in clean energy (energy efficiency and renewable energy or EE/RE) finance programs, they have the opportunity to leverage public funds including American Recovery and Reinvestment Act of 2009 (ARRA) funds by as much as 10 to 20 times. These public funds can serve as a credit enhancement to decrease risk for lenders. One type of credit enhancement is a loan loss reserve fund (LRF). The loan loss reserve provides partial risk coverage to lenders—meaning that the reserve will cover a prespecified amount of loan losses. For example, a loan loss reserve might cover a lender's losses up to 10% of the total principal of a loan portfolio. The financial institution (lender) working with each grantee can draw on the LRF to cover losses on defaulted loans according to the terms of the loan loss agreement between the lender and grantee.

The initial loan loss reserves funded by the U.S. Department of Energy (DOE) have tended to focus on single-family residential energy efficiency and renewable energy lending programs; however, loan loss reserves can be used in other markets, from commercial lending to multifamily housing lending to nonprofit lending. LRFs or other types of credit enhancements can support other EE finance mechanisms including utility on-bill financing, bond issues, property-assessed clean energy (PACE) loans, and more.

This edition of the Finance Guide includes information on options for commercial and residential clean energy financing. Chapters 1 through 4 cover concepts applicable to both markets. The information in Chapters 5 through 11 pertains to the residential sector, and this chapter in particular focuses on LRFs structured to support single-family residential EE/RE lending.

B. Rationale and Goals for LRFs

Grantees can use an LRF to entice a potential financial institution (FI) partner to offer products for financing EE/RE projects. The main goals of the EE/RE loan program are to—

- Use public funds to mobilize, leverage, and support the FI partner so it will offer, or pioneer and gain experience with, new financing products.
- Broaden access to finance for more borrowers (e.g., homeowners) by allowing the FI partner to modify its underwriting criteria and accept more risk than it would otherwise. Grantees should note that the "risk" may, in fact, be "perceived risk" as opposed to actual and demonstrated risk, due to the FI's lack of experience with EE lending.
- Lengthen loan tenors (i.e., the timeframe of the loan might be extended from 3 years to 7 or 10 years).
- Reduce loan interest rates, reflecting the lower risk associated with the LRF coverage.

The LRF supports a clean energy loan program initiated between a government agency (the ARRA grantee) and a financial institution partner (or partners). Other program partners or stakeholders, such as utilities, contractors/vendors, or not-for-profit EE organizations may also be involved in the grantee's EE/RE program to help coordinate and/or run it—conducting program marketing, installing projects, doing measurement and verification, and more.

C. Primary Characteristics of Loan Loss Reserve Funds

The four primary characteristics of a loan loss reserve fund are presented below.

1. Portfolio Approach to Credit

Loan loss reserves take a "portfolio approach," meaning that grantees setting up loan loss reserve funds do so on the basis of the entire portfolio of loans they support. For example, a 5% loss reserve on a $60 million loan portfolio means that the size of the loss reserve is $3 million.

Grantees can set the size of the loss reserve to be higher than the portfolio's estimated loan losses. For instance, if estimated losses are 1.5% on the whole loan portfolio, the grantee might size the loss reserve at between 5% and 10%, depending on the result of negotiations between the grantee and the financial institution partner.

An LRF structure works best when the target market is a portfolio with a large number of small transactions. Typical residential EE loans, for example, are in the range of $5,000–$15,000, and a typical program will aim to fund hundreds and possibly thousands of loans. Thus, default of a single loan or several loans will represent a small portion of the total portfolio. Those first losses can be covered by the LRF, up to the limits of the LRF and according to the agreed risk-sharing formula. For target markets facing the reverse situation—a smaller number of larger loans (creating what is called a "lumpy" portfolio)—other forms of credit enhancement may be appropriate. Chapter 1 summarizes other types of credit enhancement.

2. Leverage

Leverage refers to the amount of private capital that a grantee might attract to a clean energy lending program by offering a loan loss reserve. For example, if a grantee has $1 million available in ARRA funds for the LRF, a 5% loss reserve will produce $20 million in capital to lend. The leverage ratio in that case is 20:1.

Leverage can also refer to the total amount of clean energy project investment that a grantee can support with its lending program. Other sources of funds, such as utility rebates, other capital incentives, or customer capital contributions, are typically used, so the loan may finance for example only 80% of the EE project costs. Using the example above, $20 million in EE/RE loans may support $25 million in ***total*** clean energy project investment, with a leverage ratio of 25:1. Both approaches are important and valid.

3. Financial Institution Partner

The FI partner can be one or more of the following: a commercial bank, a credit union, a nonbank finance company (leasing company or specialized FI), a community development financial institution, utilities, or state-chartered (state-level) bond authorities. To set up the LRF program, grantees must identify potential FIs and research all those interested, procure the FI partner, establish a good working relationship, and structure the loan program with the selected financial institution. Different FIs have different lending practices and criteria. If the new EE/RE loan program can build on the lender's existing loan products (e.g., home improvement loans), then the FI's internal new product development process will likely be accelerated; and the grantee's program can start sooner.

4. Secondary Market Support

Some FIs (e.g., credit unions) will originate and hold residential EE loans in their own portfolio until the loans mature. Other FIs (e.g., specialized nonbank finance companies, warehouse funds, and some commercial banks) will originate loans, assemble portfolios, and then seek to refinance or sell the portfolios to a "secondary market" capital source. The DOE Financial Technical Assistance Team is

collaborating with the financial community to develop secondary market capital sources. Availability of funds from the secondary market can allow lenders to recycle and relend their loan funds more quickly than they would be able to do if they had to wait for their loans to mature. Although LRFs support the primary lender, the benefits and risk coverage of the LRF must be *assignable* to the secondary market capital source (provider) if the loans are sold to an investor in the secondary market. That is an important provision for each grantee and FI to incorporate in the program's LRF Agreement (see Section H below) if they want to have access to this secondary market.

D. Loss Reserve Funds and DOE Guidance

Eligible Use of ARRA Funds and Key ARRA Guidelines and Issues

DOE is encouraging the use of ARRA funds for LRFs because those funds can mobilize and support commercial financing for EE projects and achieve good leverage of public funds. The ultimate goal is to help make EE programs sustainable through 100% commercial financing. But all parties must be aware that an LRF, although it provides important credit enhancement, is *not* a guarantee. There is ***no*** guarantor in the LRF structure, and the grantee's liability for loan losses is strictly limited to the LRF funds provided by ARRA.

Attached in this chapter's reference materials are DOE guidance documents on the use of State Energy Program (SEP) funds and Energy Efficiency and Conservation Block Grant (EECBG) funds for loan loss reserve funds. The following paragraphs summarize a few key points.

- **Definition of "spent" for use of federal funds as credit enhancement.** ARRA funds being used for a loan loss reserve are considered "expended" or spent as part of a three-step process—funds are obligated, then drawn down, and finally committed to support individual loans. Funds must first be "obligated" to a financial institution partner as a credit enhancement to create a loan loss reserve program that will support a loan or portfolio of qualifying loans. Funds are obligated when the LRF Agreement is signed between the ARRA grantee and the FI partner; or, if the grantee is administering the program itself, the grantee can demonstrate obligation by sending a letter to the DOE Project Officer indicating the establishment of the loan loss reserve.

  Once the funds are "obligated," the funds may be drawn down from the U.S. Department of the Treasury's Automated Standard Application for Payments (ASAP) system to fund the loan loss reserve account(s) or escrow accounts necessary to administer the loan loss reserve. However, under DOE Guidelines, the funds are only considered fully "expended" when funds are actually committed to support individual loans or portfolios of loans.

  One key administrative advantage of the LRF structure is that funds may be placed in an escrow account with a financial institution as soon as the LRF Agreement is signed and before any loans are made. Funds are then transferred from the escrow account to the reserve account as loans are made. Note, however, that the loans expected to be "covered" by the loan loss reserve must all be made within the ARRA spending deadlines because the funds are only considered "spent" once they are (a) committed, (b) disbursed to the FI partner that will offer loans to borrowers for qualifying EE/RE projects, and (c) committed (placed in a reserve account) to support individual loans or portfolios of loans.[1]

  This presents a bit of a dilemma for the grantee: a grantee is encouraged to create maximum leverage with the ARRA funds (a 20:1 leverage ratio means that $20 in loans are made for every

[1] See EECBG Program Notice 09-002B, August 10, 2010, www1.eere.energy.gov/wip/pdfs/eecbg_financing_guidance2010_08_10.pdf
The full text is also attached at the end of this chapter.

$1 in a reserve account); but if a high leverage ratio is established, it will take longer to loan out all of the funds "covered" by the loan loss reserve. Some variations are possible for grantees to consider. For example, the LRF Agreement can specify that loans be made with a 90% loan loss reserve (thus *expending* 90% of the loan amount when that loan is made and the loss reserve committed). But the LRF Agreement would then further specify that after a quarter (3 months), the loss reserve would be reset to a target amount of, for instance 5%. The difference between the 90% and the 5% would then be placed into an escrow account to support additional lending, but the expenditure targets will be more easily met while grantees benefit from the high leverage.

- **LRF budget and use of ARRA grant funds for program development and administration costs.** ARRA grant funds can be used for finance program development costs that are incurred after the date of the SEP or EECBG grant award. Under federal guidelines, grantees are permitted to use up to 10% of grant funds for program development and administration costs. Grantees should be aware, however, that individual states may vary in their interpretation and application of that guideline.
- **Limit on total proportion of funds that can be used in an LRF.** A grantee **cannot** use more than 50% of its ARRA SEP or EECBG funds for an LRF.
- **Interest earnings on LRF funds.** Grantees can earn interest on LRF funds in the escrow or reserve accounts. That is, however, a point of negotiation with the individual FI selected to administer and house the account, and any interest earned must be used for ARRA-eligible purposes.
- **Disposition of funds at the end of the LRF Agreement.** Funds remaining from an LRF program can be used by the grantee provided they are used for grant-eligible purposes. This interpretation may vary from state to state, as some state governments may want remaining SEP funds returned to the state.

E. LRF Risk-Sharing Formula

The above discussion of "leveraging" mentions the risk-sharing formula that the grantee and the FI partner must negotiate and agree to. This section provides additional details.

An LRF risk-sharing formula typically has two main parameters. The first is the ratio of the LRF funds to the total original principal amount of the loans in the EE/RE loan portfolio. The single family residential programs that currently use a loan loss reserve structure frequently have a loss reserve of between 5% and 10% of the total portfolio original principal, implying a leverage ratio between 10:1 and 20:1. Lending in some of the residential markets with low credit quality might require higher loan loss reserves. For instance, one commercial loan program now available in Detroit will likely require a loss reserve of as much as 50% (only a 2:1 leverage) because borrowers in that program have less than ideal credit. A higher leverage ratio means that the program can offer more loans than it could with a lower leverage ratio. But it also implies less risk protection for the lender. A lower leverage ratio implies greater risk protection for the lender. Another program for residential homeowners in a very low income area of Indianapolis also has a 50% loan loss reserve in order to attract capital to that neighborhood.

Loan loss reserve funds may come from multiple sources. In addition to the grantee's ARRA funds, potential sources include contributions from local vendors/contractors, utilities (as part of their EE/RE or demand side management (DSM) program funds), and other donors interested in EE/RE residential improvements.

The second parameter in the LRF risk-sharing formula is the share of the losses on individual loans that the LRF will pay. This is negotiated by the FI partner and the grantee. For instance, if one loan in a

portfolio defaults, the lender might be able to recover only 80% of the unpaid principal amount of the loan from the loss reserve. This structure leaves the lender with some cash still at risk and motivates the lender to require high-quality loan origination and collection procedures. The recovery for individual loans ranges from 50% to 100%; but the higher end of the range, 80% to 100%, is typical. Eighty to ninety percent strikes a good balance, leaving some of the first losses to be borne by the FI partner, covered through its normal loan loss provisioning. Even if the LRF pays a large portion of the first losses, the FI has a vested interest in minimizing first losses to keep the LRF intact so that it can cover any future losses on the balance of the portfolio.

The financial institution is responsible for all losses in excess of those covered by the loan loss reserve; these are sometimes referred to as second losses. Because the FI is fully at risk for all second losses, it has a strong incentive to ensure high-quality loan origination, collections, administration, and recoveries. Grantees should expect the FI partner to bargain hard for those provisions.

The entire risk-sharing formula between the loan loss reserve fund and the FI is important and further demonstrates that the LRF is not a loan guarantee, nor does it eliminate risk altogether for the lender. The liability of the grantee (the local government or other entity using ARRA funds for the LRF) is limited to the funding provided by ARRA (and in some cases by other donors).

The table below presents a sample calculation for an LRF program budget and risk-sharing formula.

Loan Loss Reserve Fund Program, Sample Budget and Risk-Sharing Formula Calculations

1	LRF ARRA grant budget	$1,000,000
2	Grant funds for program development & operations	$100,000
3	Net funds for LRF escrow account	$900,000
4	"First Losses" as % of total original principal	5.00%
5	Share of first losses borne by LRF	90.00%
6	Share of first losses borne by FI partner	10.00%
7	Total lending that can be supported with this LRF risk-sharing formula	$20,000,000
8	Average portion of EE projects paid by loans (homeowners/utilities/others cover the remaining 20%)	80.00%
9	Total EE Project Investment that can be supported	$25,000,000
10	Leverage ratio #1 (LRF funds to total lending product size supported)	22.22
11	Leverage ratio #2 (LRF funds to total EE project investment supported)	27.78

F. Residential EE Loan Terms

The following terms are important for grantees to understand and use confidently as they discuss, negotiate, and finalize details of the clean energy loan product with the selected FI partner(s). Grantees are advised to use the bargaining power that the loan loss reserve affords to negotiate loan origination procedures, interest rates, loan tenors, underwriting guidelines, and other terms to broaden access to their lending programs.

- ***Eligible Borrowers:*** For the residential sector, single-family residential property owners in the geographic area of the ARRA grantee. The definition of “single-family residential” can actually include more than one family dwelling in a single building, as long as (1) the building is owner-occupied, and (2) the ownership of the building is held by the owner-occupant as an individual and not a business entity such as a partnership or limited liability corporation. This distinction is crucial for categorical exclusions to the Davis-Bacon Act requirements.

- ***Eligible Projects:*** All types of energy efficiency and small-scale renewable energy projects and equipment, meeting DOE guidelines.
- ***Loan Application and Origination Procedures:*** The FI provides standard loan application materials and defines full loan origination procedures, including credit screening and analysis/ approval procedures, as well as standard loan documents.
- ***Loan Tenors:*** For residential EE/RE projects, 3- to 7-year tenors are typical, with 10 years often the maximum.
- ***Interest Rate:*** The FI's interest rates will likely be market based for the type of loan product offered to homeowners, but the FI will factor in the extra security offered by the LRF. Rates will be fixed for each loan at the time of loan application approval. One option to consider for setting the interest rate is for the FI partner to provide a published interest rate index as a benchmark for loan pricing. In other words, the financial institution will provide grantees a standard, well-known index upon which it bases proposed interest rates. Such an index might be the U.S. prime rate, the London Interbank Interest Rate (LIBOR), or the U.S. Treasury Bond rate for bonds of similar tenor. A grantee could use some of its ARRA funds to buy down interest rates below the level that the FI is willing to offer. Another option is for the grantee to specify a desired rate as a start-up rate for the program and then to agree upon a mechanism for future rate adjustments.
- ***Payment Schedule:*** Monthly payments are standard operating procedure, with constant and level payments of interest and principal.
- ***Loan Size – Minimum and Maximum:*** The FI partner and the grantee determine this through negotiation. Typical minimum loan sizes in the residential sector are $2,500, while the maximum loan size is between $15,000 and $20,000.
- ***Loan Underwriting Guidelines and Security:*** Loan underwriting guidelines—meaning minimum credit scores and similar measures of borrowers' willingness and ability to pay—can be the subject of negotiation between lenders and grantees. In general for residential loans, grantees should not expect FIs to be comfortable with a credit score below 640 for an unsecured loan, although some FIs may be more (or less) stringent in their underwriting standards. In some instances an FI may be willing to lower its risk with less qualified borrowers (i.e., those with lower than 640 FICO scores) by filing a UCC-1 on the installed equipment or some other type of security (see Section G below for details). Higher loan loss reserve amounts (such as those in Indianapolis, mentioned earlier) may also provide lenders with the comfort to be able to lend to individuals with lower credit scores.
- ***Loan Disbursement and Flow of Funds During Project Construction:*** The grantee and FI partner will develop these together. The simplest method is a single loan disbursement authorized by the borrower to the contractor, following completion and acceptance of the EE or RE project. In some cases, program partners may want to investigate methods for construction advances for larger projects, and grouping multiple projects for implementation. DOE guidelines allow checks to be written to either the contractor or the homeowners, as long as a contract exists between the contractor and the homeowner to demonstrate that the ARRA funds will benefit the homeowner.
- ***Prepayment Option:*** EE and RE loan programs do not typically have a prepayment penalty, and the LRF Agreement should make this explicit.

A sample loan term sheet is included as Attachment A at the end of this chapter.

G. Typical Underwriting Guidelines and Impact of the LRF on Underwriting Guidelines

Underwriting guidelines are a central aspect of the residential EE/RE loan program, establishing the criteria the lender will use to determine creditworthiness and thus the eligibility of prospective borrowers to receive a loan. The loan program discussed in this document is "unsecured," meaning that the lender does ***not*** take out a lien on the property as security; and no appraisal of the property will be required, although other forms of security may be necessary. Grantees and their financial advisor(s) negotiate the underwriting guidelines with the FI partner(s); doing so and doing it well is a critical aspect of setting up a clean energy loan program. Underwriting takes into account the following issues:

- The EE equipment that contractors install as part of the lending program has low-to-no collateral value, so in essence the FI's credit analysis looks to the borrower's *ability to pay and willingness to pay.*
- "Ability to pay" is the core of the credit analysis for unsecured residential EE loans. This is determined principally through the borrower's credit score, debt-to-income ratio, and confirmation of steady income.
- "Willingness to pay" is enhanced by the fact that the energy equipment is "essential use" for property owners: it is what keeps their home comfortable. In many cases, homeowners cannot live in the house without the equipment in question—furnaces, air conditioners, etc. Credit analysis examines the combination of ability to pay (income and debt to income ratios) as well as willingness to pay (borrower bill payment history). Both are important to the credit analysis.
- Lenders may file a UCC-1 (fixture filing). This creates a lien on the installed EE equipment itself. That lien does not allow the lender to foreclose on the property, but the lender can, in theory, repossess the equipment or deny beneficial use of the equipment in event of loan default. While this remedy is unlikely to be exercised, the UCC-1 does have other benefits. In the event of property sale, transfer, or mortgage refinancing transaction, the lien will appear in the title search and will need to be cleared or resolved as a condition of the transaction. Thus, the lender can get repaid in such circumstances. Many lenders feel that a UCC fixture filing is costly and not worth the time or money to file because it results in very little additional security in the event of default especially in the case of most energy efficiency installations; repossessing insulation is almost impossible, for example.
- Grantees and the homeowners they hope to assist in their EE/RE loan programs should be aware that some FIs do like to file a deed of trust, which represents a lien on the real property; however, the FI would be "last in line" to collect, after any other first or second mortgage payment. Some FIs will do this even without conducting property appraisals or applying any loan-to-value criterion.

Typically, the underwriting guidelines address the following:

- Confirmation of income.
- Debt-to-income (DTI) ratio, which is calculated using total debt service and gross income. A typical ratio is 40% to 50%; but grantees can argue for and some FIs have agreed to higher DTI ratios, given the fact that energy cost savings from the EE/RE project will improve the homeowner's ability to pay. In some markets, the acceptable DTIs are as high as 45% to 50% for residential EE loans.
- Minimum FICO credit scores that vary by FI partner—some FIs look for a minimum of 680 to 700; others accept a minimum of 640 or lower.

- For unsecured loans, some FIs may require fixture filing (UCC-1) on project equipment.

Note that most FI partners do ***not*** expect or set, as part of the underwriting guidelines, a loan-to-value criterion (referring to the real property appraised value and total mortgage debt outstanding on the part of the homeowner). However, FIs can and do apply an additional interest rate premium if they feel that the clean energy lending program places their lending capital at a high risk.

Impact of the LRF on Standard Underwriting Guidelines

Grantees can use LRFs to persuade lenders to offer more flexible terms. The availability of an LRF can have these benefits:

- Reduces required credit score. Minimum qualifying credit scores of as low as 600 exist in some programs.
- Increases debt-to-income ratio. Typical ratios will be from 40% to 50%.
- Lengthens loan tenor. Loan tenors are typically up to 10 years, although in some cases FIs may be willing to offer longer loan tenors.
- Allows larger unsecured loans. High loss reserves can convince lenders to offer unsecured loans in excess of $20,000, although a cap on unsecured lending of $15,000 to $20,000 is typical.
- Increases or eliminates the loan-to-value criterion and any requirement for property appraisal. Both of these are taken for granted in a typical “unsecured” loan situation without an LRF.
- Reduces or eliminates required customer capital contribution.
- Lowers the interest rate.

Standard Underwriting Guidelines for Secondary Market Development

DOE is supporting work to develop a standard set of underwriting criteria for the secondary market. These criteria would create a standard loan product that is uniform enough for secondary market investors to understand its risks and consider a purchase of the loan product. The program options at the end of Chapter 1 describe some of the typical criteria.

H. Steps for Developing a Clean Energy Financing Program with a Loan Loss Reserve Fund

Typically, grantees will work with interested parties or partners to develop a clean energy loan and LRF program that involves the following steps:

- Finance structuring and program design, informed by market research.
- Outreach to FIs and, in many cases, preparation of a request for proposal (RFP) from financial institutions.
- Developing, negotiating, and closing on the implementing agreements.

Finance Program Structure and Design

Research and discussions on finance program design can—

- Identify interested FIs, determine their level of interest in the program, reveal the financial products they already offer, and determine whether those products are analogous or close to the type of lending the grantee seeks.

- Help grantees understand project economics from the end-user (homeowner) standpoint, including potential energy (kWh) and cost savings, applicable utility rebates and incentives, local/state incentives, and federal tax credits.

The grantee can prepare (or have a consultant prepare) a Finance Program Design Document that summarizes the proposed financing program's structure, including use of the loan loss reserve fund. This can be done in an executive style for review and endorsement by the ARRA grantee in its official decision making process (e.g., the city or county council).

Financial Institution Request for Proposal (RFP) and Selection Process

As a state or local government, the ARRA grantee typically conducts a competitive procurement procedure to award the LRF funds to an FI partner. The RFP typically covers:

- Program background, goals, program partners and their roles over the full project cycle, ARRA funds and guidelines, the target borrower market, types of EE or RE projects, economics of the projects, clean energy investment and lending volume targets, and loan marketing.
- Proposed structure and terms of the residential EE/RE loans, including eligible borrowers, eligible projects, expected tenors, underwriting guidelines, and proposed loan terms.
- Proposed structure of the LRF, including the indicative risk-sharing formula and preliminary terms of the LRF Agreement.
- Prescribed format and content for FI proposals in response to the RFP, outlining all of the information needed from the FI regarding its loan terms, preferred LRF structure and risk-sharing formula, loan underwriting guidelines, loan marketing capacity, staff, and qualifications.
- Description of the RFP rules, processes, and schedule that will lead to the selection of FI partner(s) and execution of the implementing LRF Agreement.

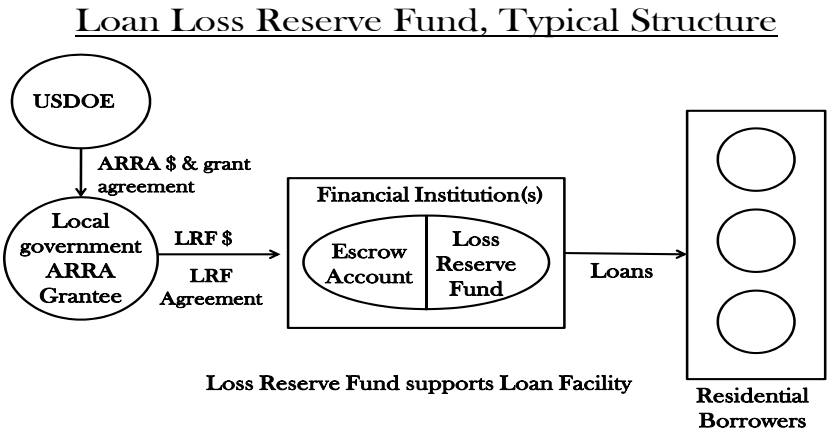
A sample RFP for financial institutions is included in Chapter 15.

Implementing Agreements

Implementation of the LRF program typically involves two agreements:

- The LRF Agreement between the FI partner(s) and the ARRA grantee, which addresses the deposit and use of the LRF monies.
- A less formal EE loan program agreement between the FI partner and the ARRA grantee and/or other program partners, which addresses the full EE loan origination cycle, including cooperation in loan marketing, credit screening and analysis, and other steps involved in loan origination, as well as marketing and reporting responsibilities.

Definitions of typical terms used in those agreements are provided below in the section *titled LRF Agreement*, and a sample agreement is included in Chapter 15. The typical LRF structure is illustrated in the figure below.



Financial Advisor's Scope of Work

Some grantees will use a financial advisor or advisory team to assist them and their program partners in developing and setting up an EE lending program supported by an LRF. The scope of work for such an advisor or team could entail the following:

(a) Assess the finance component design options researched or prepared by the grantee and recommend a design. Consult with key program stakeholders and participants. Carry out research on FIs and confirm the interest of qualified FIs to respond to the RFP. Advise the grantee on ARRA rules and requirements. Fully explain to the grantee and partners the project economics from the end-user's viewpoint. Assist in vendor/contractor research and network development as needed.

(b) Prepare a Finance Program Design Document and an executive summary for review and endorsement by key local or state government officials; this document should include plans for the FI RFP. Support the ARRA grantee in decision making on the plan to proceed.

(c) Prepare the FI RFP for the grantee's review. Assist the ARRA grantee in conducting the procurement process, to include promoting the RFP, supporting a pre-bid conference (if applicable), reviewing proposals, advising the evaluation and selection committee, and assisting in negotiations with the selected FI.

(d) Prepare implementing agreements, including the LRF Agreement. Assist in negotiating the loan product and LRF Agreement with the selected FI(s).

(e) Advise on the finance program's start up and implementation.

In the scope of work for the financial advisor, grantees can require written deliverables, such as the Finance Program Design Document, the FI RFP, and implementing agreements, with supporting memoranda prepared as needed.

LRF Agreement

Key terms of the LRF Agreement include the following:

- **Residential EE Loan Program.** The LRF Agreement summarizes the grantee's overall residential EE/RE loan program and defines its lending targets.

- **Loan Product.** The LRF Agreement defines the residential EE/RE loan product. A complete term sheet can be included as an annex to the agreement.
- **Underwriting Criteria.** The grantee and the FI will agree in advance on underwriting guidelines for the loans. The FI shall have the right to include loans under the LRF coverage that meet those underwriting criteria. The underwriting criteria can be adjusted during the course of the program with the approval/agreement of the grantee and the FI.
- **Escrow Account and Reserve Account.** The ARRA grantee deposits the LRF funds in an escrow account with the FI partner or other fiduciary, after which funds are moved in the appropriate proportion into a reserve account as loans are made. Rules for disbursements of funds from the reserve account are defined up front and tied to the definition of "Loss" and "Event of Loss." These accounts can be held by the same FI that is doing the lending, but the rules for transfers and disbursements have to be clear and unambiguous. The FI assumes responsibility as a fiduciary for applying these rules. Reinvestment of funds in these accounts (permitted investments) is defined in the LRF Agreement along with application of interest earnings.
- **Definition of Loss and Event of Loss.** "Loss" is usually defined as and limited to principal only on the loan. "Event of Loss" is tied to the definition of loan default and acceleration under the FI's Loan Agreement with its borrower and occurs when the FI partner gives its acceleration notice to the defaulted borrower demanding all payments due under the "Loan Agreement Between Bank and Borrowers." A certain number of days after this event (e.g., 30 days), the FI can disburse funds from the LRF account to cover the agreed loss share.
- **Responsibility for and Distribution of Recoveries.** The FI is responsible for recovery actions on defaulted loans. Recovered monies, net of reasonable collections costs, are deposited back in the LRF reserve account in proportion to the share of losses paid by the LRF. Grantees should not expect high levels of recovery on loans once they have defaulted.
- **Reporting and Monitoring.** The FI partner provides the grantee quarterly reports on the loan portfolio, the number and amount of loans, collections payment performance, and all activities on the LRF reserve and escrow accounts. A chapter outlining those recommendations and requirements is forthcoming.
- **Availability Period.** The timeframe for adding loans to the portfolio and shifting funds from the escrow account to the reserve account must be clearly defined in the LRF Agreement and tied to the ARRA grantee's schedule requirements.
- **Final Disposition of LRF Funds.** The reserve account must stay in place until the entire loan portfolio is retired although the balance of the LRF fund may change as the balance of outstanding loans moves up or down. When the EE loan portfolio is fully retired, all LRF funds will be transferred back to the escrow account; and from there, the future use of the remaining funds can be redirected by the grantee (e.g., the city, county, or state designated to support further EE/RE lending).
- **Program Fees.** The FI can be asked to pay fees to the EE/RE loan program in the range of 1-2% of the principal amount of all loans added to the program's loan portfolio. These fees represent another source of income to help make the EE program sustainable and scalable. These fees could also be assessed on contractors, who are accustomed to paying much larger fees for credit cards or other vendor finance programs. Grantees must, however, be sensitive to the fact that fees will be passed on to borrowers, which could affect the goal of keeping the loan program affordable. Program fees are optional.
- **Reprogramming Funds in the Escrow Account.** Funds in the escrow account belong to the ARRA grantee. The LRF Agreement should acknowledge the right of the ARRA grantee to

reprogram use of the funds, as needed, to adapt to the program's operating experience. However, to protect the FI partner's investment in setting up the program, reprogramming of funds should only be permitted per agreed-upon conditions.

- **Accommodating the Portfolio "Ramp-up" Period.** Before the portfolio builds up, a single loan loss could represent a large percentage of the outstanding total loan principal. Thus, in the beginning, a larger contribution, per loan, to the LRF reserve account (from the escrow account) may be negotiated to give the FI partner the necessary level of risk sharing during the portfolio ramp-up period.
- **Assignment.** The FI partner should have to right to make the benefits of and claims payments from the LRF Reserve Account *assignable* to any future purchaser of the loan portfolio (under a secondary market scenario). The ARRA grantee's approval may be required for this purpose.

A sample LRF Agreement is included in Chapter 15 of this Guide. Grantees should be aware that there are multiple ways to address the required terms. In addition, EE programs can decide to include other components, such as lending to the small commercial sector, interest rate buydowns, and LRF contributions from multiple sources. Those features will require further customization of the LRF Agreement.

A template EE loan program agreement, addressing the full project marketing, development and loan origination cycle, and coordination of same between the FI partner and other program parties, is also included in Chapter 15.

I. Developing and Managing the Vendor/Contractor Network

Before funds can be released from the financial institution to the contractor, certain checks and balances must be in place to ensure that (a) work is being done on ARRA-eligible projects by (b) competent contractors, and (c) the work has been satisfactorily completed. A key component of this chain is building and maintaining a qualified contractor network. Programs underway are using various models for building and maintaining such a network, examples of which include:

- ***Community Action Agency/Program (CAA or CAP).*** Of the 1,000+ long-established community action agencies around the country, many perform upgrades on low-income housing and have fully established contractor networks. Grants totaling $90 million have recently been issued under ARRA to support the use of a wide range of energy efficiency and renewable energy technologies by over 100 high-performing local weatherization providers across the country (http://www1.eere.energy.gov/wip/serc_projects.html). This represents a large pool of competent EE contractors that, with appropriate coordination, could be used to form the foundation of a larger EE contractor network. Agreements can be executed with the CAA to utilize this pool of qualified and certified low-income weatherization contractors for a more community-wide program. See the example from Bellingham, Washington, below.
- ***Construction Permits.*** This model takes advantage of the local processes of issuing construction permits and verifying proper completion of projects. Most municipalities have some variation of a Department of Construction and Land Use. These departments employ inspectors to permit construction projects and verify the completed work's compliance with safety standards. This model uses an interdepartmental agreement to pay the cost of permit inspectors also validating energy efficiency projects. See the example from Kitsap County, Washington, below.
- ***Third-Party Consultants.*** A number of nonprofit organizations exist for the purpose of reducing energy consumption through weatherization programs. Each of these organizations has its own associated pool of qualified contractors. A municipality orchestrating its residential

EE/RE retrofit program can contract with the third-party consultant to develop and manage work with the EE contractors. See the examples from Milwaukee, Wisconsin, and Bainbridge Island, Washington, below.

The steps required for proper distribution of loan funds in a residential energy efficiency retrofit project are as follows:

- An energy auditor determines the scope of work.
- An EE contractor is selected from a pool of pre-certified contractors.
- Oversight is performed on the participating contractor.
- Satisfactory completion of the work is certified.
- The funds are disbursed to the contractor.

Examples

Bainbridge Island, Washington – The Bainbridge Island Energy Challenge used a portion of its EECBG monies to partner with the Conservation Services Group (http://www.csgrp.com/index.html), a national consulting firm dedicated to helping people in the United States use energy wisely. This third-party consultant has its own contractor network and handles all aspects of the selection, oversight, and completion assurance of its contractors.

Bellingham, Washington – The Bellingham/Whatcom County Community Energy Challenge has partnered with a local community action agency, the Opportunity Council, to house a "one-stop shop" to arrange an energy audit, apply available utility rebates, select the contractor to perform the retrofit work, and arrange the loan loss reserve-backed bank loan. The Opportunity Council assumes oversight on the project and provides an independent inspector to determine if the EE project meets standards. If the project does not do so, the Opportunity Council sends the contractor back to the job until it is completed properly, at which point the Opportunity Council signs a certificate of completion that is passed onto the bank for disbursement of funds to the contractor (http://fms1.oppco.org/news/news_popup.php?itemsel=68).

Kitsap County, Washington – The Kitsap Green Weatherization Program uses local utilities to provide energy audits to the homeowner at no cost. Once a scope of work for a particular residential EE project is determined and agreed upon with the homeowner and the FI, the county uses its building inspectors, who have been recently certified by the Building Performance Institute (http://www.bpi.org/), to ensure that the work about to be done is in compliance with ARRA eligibility. Upon project completion, the inspector, who would normally sign off on compliance with local safety ordinances and standards, now signs off on the fact that the home EE retrofit has also been completed to standards. This information is shared with the local credit union, which can then issue the loan amount to the contractor.

Milwaukee, Wisconsin – Using a Better Buildings grant for $20 million, the City of Milwaukee is using Wisconsin's Focus on Energy Program (http://www.wifocusonenergy.com/) to supply qualified contractors for its residential retrofit program, the "Me2 Energy Efficiency Retrofit Program." The Me2 Program has Focus on Energy-selected energy auditors and retrofit contractors from its well-vetted pool of contractors. Focus on Energy directs consumers to consultants aligned with the Home Performance with ENERGY STAR® Program, who provide a computerized analysis of a home's energy consumption, make recommendations on the most cost-effective improvements, and direct customers to a qualified energy contractor.

Note that the broader aspects of creating an energy efficiency program are the subject of a separate, longer document available on the DOE Solutions Center website as of early December 2010.

Attachments

A. Sample Residential EE Loan Term Sheet and Underwriting Criteria

B. DOE Guidance Documents (http://www1.eere.energy.gov/wip/guidance.html)

(1) EECBG PROGRAM NOTICE 09-002B. **Guidance for Energy Efficiency and Conservation Block Grant Grantees on Financing Programs**

EFFECTIVE DATE (Revised): August 10, 2010 (Originally Issued: December 7, 2009)
http://www1.eere.energy.gov/wip/pdfs/eecbg_financing_guidance2010_08_10.pdf

(2) SEP PROGRAM NOTICE 10-008B. **Guidance for State Energy Program Recipients on Financing Programs** [revolving loan funds and loan loss reserves]

EFFECTIVE DATE (Revised): August 10, 2010 (Originally Issued: March 8, 2010)
http://www1.eere.energy.gov/wip/pdfs/sep_financing_guidance2010_08_10.pdf

Attachment A

Residential Energy Efficiency Project Loans:
PRELIMINARY/SAMPLE RESIDENTIAL EE LOAN TERM SHEET & UNDERWRITING CRITERIA

This document provides a sample or preliminary term sheet for single family residential energy efficiency (EE) loans. The EE loan program (Program) would be initiated between a local government or other organization (contractor/vendor, nonprofit organization) and financial institution (FI) partner(s). These preliminary terms can provide a basis for discussions and negotiations with prospective FI partners. Final terms would be subject to negotiation and may vary between FI partners.

Eligible Borrowers: Single family residential property owners within the geographic target area of the Program. Target areas are: _____ [*name geographic areas*].

Lender: _____ (Financial Institution or "FI") chartered to make loans in _____ [*name state*].

Eligible Projects: Energy efficiency projects, as defined by _____ [name ARRA or other state criteria], implemented in facilities of Eligible Borrowers ("Projects"). Eligible project costs include: equipment, labor and installation (turnkey service including bonding as applicable), project engineering and development, construction management, legal and financial, construction period interest, construction contingency, contractor overhead and profit, and reserve funds or equipment replacement reserves, as applicable.

A portion, up to 20%, of use of proceeds shall be allowed for non-EE projects. Projects will be implemented by _____ approved contractors with _____ providing construction management oversight and tracking.

Minimum Loan: estimated at _____ [$2,000 to $3,000] for residential.

Maximum Loan: to be negotiated with FI and determined case-by-case based on individual Borrower credit analysis; estimated at $10,000 to $15,000 for unsecured loans.

Project Construction Financing: To be negotiated with FI and contractors. Estimated plan is that construction financing will be provided by contractors, with interest costs during construction will be capitalized. Thus, the Loan will be for term finance only and will disburse at and immediately following project completion and acceptance.

Loan Tenors: up to 10 years, to be determined. [NOTE: 15 years may be possible.]

Payment Schedules: Financing payment schedules shall be level payments of principal and interest.

Prepayment Option: Option to prepay the outstanding loans in whole without penalty is expected; partial prepayment options being investigated.

Minimum Borrower Capital Contribution: To be determined case-by-case. Up to 100% financing for net project costs, net of applicable incentives (utility and other), shall be possible, but some Borrower capital contribution, e.g., 10%, may be required, case-by-case.

Interest Rates: Interest rates on the loans will be determined based on (i) market conditions and indices, to be established in negotiation with the FI; and (ii) Loan terms and risk weighting for Borrower credit, including application of loan loss reserve funds (LRF). Fixed interest rates are sought. Under current market conditions, and based on discussions to date with candidate FIs, estimated rates are as follows:

a) for residential unsecured loans, _____%
b) for residential secured loans, _____%

Rates will be fixed for each Loan at the time of loan application approval. FI will provide a published interest rate index as a benchmark for Loan pricing. Risk weighting of pricing is possible and can be applied.

Loan Application & Documentation: Standard loan application and Loan document materials provided by the FI.

Loan Servicing: By FI.

Estimated Underwriting Criteria, Residential: To be developed and finalized with FI. Indicative sample underwriting criteria, in addition to the LRF, are as follows.

- Confirmation of income
- Total debt-to-income (DTI) no greater than ___% [45% to 50%]. (will vary by FI)
- Note: DTI criterion can be raised to reflect the estimated energy cost savings associated with the project
- For unsecured loans, fixture filing (UCC-1) on project equipment.
- For secured loans (second/third mortgage or deed of trust), maximum loan-to-value will vary with Borrower credit score; expected range = 80% to 100%. [Note: In general, we will avoid secured loans and the need for appraisals and LTV criterion.]
- Minimum FICO credit scores of ____ [e.g., 620 to 640] (will vary by FI)
- Risk weighting of pricing is expected

Project Reporting: FI and borrowers will cooperate with the Program to gather information on achieved Project energy savings as required by the U.S. Department of Energy and the American Recovery and Reinvestment Act of 2009 (ARRA). This information will be gathered and reported by _____ [Program sponsor or contractor].

Attachment A was prepared by Energy Efficiency Finance Corp.

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