



# Financing Energy Efficiency Improvements Through the Utility Bill

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U.S. DOE



**NYSERDA**

# **New York On-Bill Recovery Financing**

**May 28, 2015 | Better Buildings Summit**  
**Jeffrey Pitkin, Treasurer**

# Implementation and Scope

- Legislation signed 8/4/2011; Launched early 1/30/11
- Expanded existing Green Jobs-Green New York Financing Program launched Dec 2010
  - Residential unsecured direct-pay Smart Energy consumer loan
  - Small business/NFP and multifamily building participation loans

## On-Bill Recovery Financing Borrower Eligibility

- Residential - limited to property owners – max loan \$25,000
- Small business/not-for-profit - max loan \$50,000
- Borrower must be named on utility account

# Program Features

- **Statewide program (through 6 IOUs and Long Island Power Authority)**
  - Not utility-funded or utility obligation; funded ultimately through capital markets
- **Tariff obligation – installment charge treated like utility charges**
  - Subject to termination of service and deferred payment arrangements
  - Installment charge subordinated to utility collection of its charges
- **Transferrable**
  - Prior to sale, seller must provide written notice to purchaser
  - Unless satisfied prior to sale, charge survives changes in ownership
  - Requires filing of a Program Declaration in county/city clerk – not a lien, provides notice
- **Eligible Measures**
  - Energy efficiency measures (and PV and net-metered technologies effective Mar 2014)
  - Cost effectiveness: Loan installment charge may not exceed 1/12th of energy savings (from all energy fuels)
    - Cost effectiveness for unsecured Smart Energy loan less restrictive – .8 SIR

## Program Features (Continued)

- **Charge placed on electric utility bill**
  - Unless the majority of savings result from gas measures, in which case on gas utility bill
- **Fees paid to utilities to fund billing system modifications & costs**
  - Allocated \$900,000 in federal grant funding
  - \$100 per loan to the applicable utility within 30 days of closing
  - 1% of loan amount to the applicable utility within 30 days of closing
- **Requires consumer notices**
  - Notice prior to closing - states financial and legal obligations of loan and NYSERDA complaint handling procedures
  - Annual utility billing notice - provides amount and duration of remaining installment charges and NYSERDA complaint handling procedures
- **Regulatory oversight**
  - PSC approval of utility tariffs
  - Participation initially limited to .5% of each utility's customers
  - PSC can suspend if finding of significant increase in arrears/ disconnections directly related to on-bill

# Roles and Responsibilities

- **NYSERDA** – program administrator and capital provider
- **Loan Originator (Energy Finance Solutions)** – qualifies applicants for financing based on NYSERDA standards; issues Note to consumers, disburses loan to contractor upon project completion
- **Utility** - billing and collection of on-bill loan installment charges; performs follow up collections in accordance with normal procedures
- **Master Loan Servicer (Concord Servicing Corporation)** – reviews loan origination; weekly data exchange with utilities to initiate loan installment charges and changes; accepts monthly remittances from utilities and tracks loan status
- **Title Company** – performs last owner search and records Program declaration and satisfaction

# Residential Loan Terms

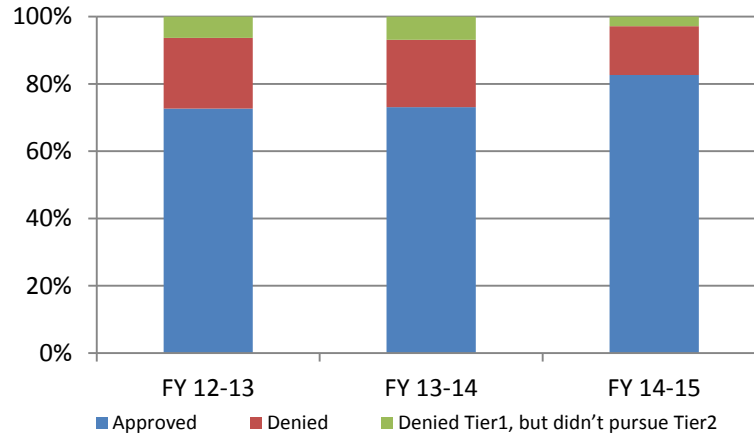
- **Loan term** – 5/10/15 yrs – can't exceed useful life
- **Interest rate** – 3.49% (subject to change)
- **Borrower fees**
  - EFS Lender processing fee \$150 (can be financed)
  - NYSERDA also pays loan originator \$175 fee funded from interest

# Loan Underwriting Standards

| Standard                 | "Tier 1" Loans  | "Tier 2" Loans  |
|--------------------------|---|---|
| Minimum FICO             | 640<br>(680 if self-employed for 2yrs+)<br>(720 if self-employed < 2yrs)  | 540   |
| Mortgage payment history | None  | Current on all mortgage payments, if any (as reported on vredit report), for the past 12 months.<br>No payments more than 60 days late during the past 24 months. |
| Max Debt-to-Income Ratio | Up to 50%   | Up to 80% for FICO 680+<br>Up to 75% for FICO 600-679<br>Up to 70% for FICO 540-599<br>Up to 100% for LMI consumers (<80%AMI) who received up to 50% subsidy      |
| Bankruptcy               | No bankruptcy, foreclosure, or repossession within last 7 years   | No bankruptcy, foreclosure, or repossession within last 2 years   |
| Judgments                | No combined outstanding collections, judgments, charge-offs, or tax liens > \$2,500   |   |
| <u>Revision history:</u> |   |   |
| 1/26/11                  | Increased Tier2 DTI to 55%  |   |
| 7/21/11                  | Increased Tier2 DTI to 70% if FICO 680+; Revised Tier2 bankruptcy history to 5 years  |   |
| 10/18/11                 | Allowed Tier2 DTI up to 100% for Assisted   |   |
| 9/25/12                  | If no mortgage history was available, requirement satisfied if current for 9 months on utility payment  |   |
| 7/18/14                  | Revised min FICO score to 540, eliminated utility payment history, revised DTI limits (up to 80%/75%/70% based on FICO), and shortened bankruptcy history to 2 yrs. |   |



# Loan Underwriting Performance

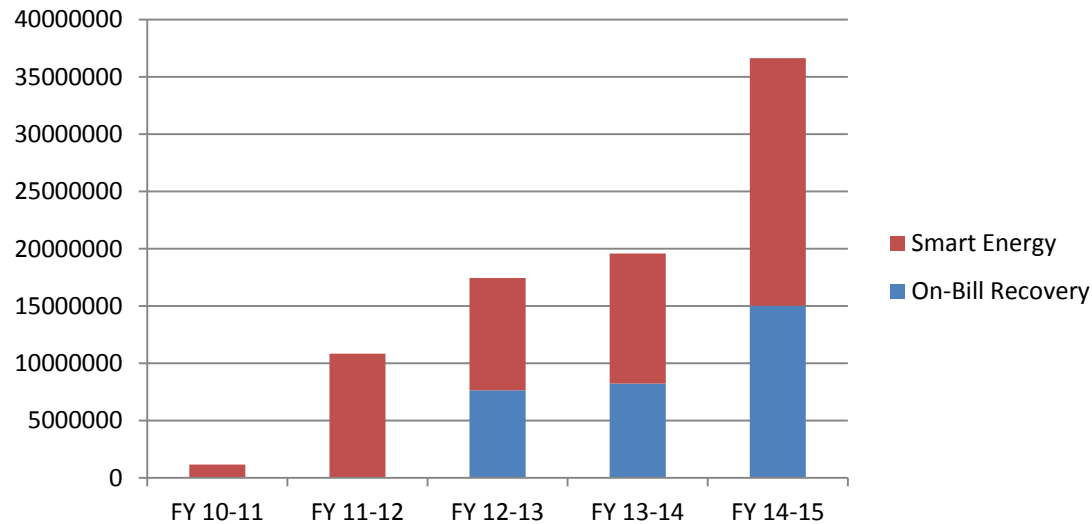


|                                       | <u>FY 12-13</u> | <u>FY 13-14</u> | <u>FY 14-15</u> | <u>Cumulative%</u> | <u>Cumulative#</u> |
|---------------------------------------|-----------------|-----------------|-----------------|--------------------|--------------------|
| Approved                              | 72.7%           | 73.1%           | 82.7%           | 74.9%              | 15,045             |
| Denied                                | 21.0%           | 20.0%           | 14.5%           | 19.6%              | 3,938              |
| Denied Tier1, but didn't pursue Tier2 | 6.3%            | 6.9%            | 2.8%            | 5.5%               | 1,102              |
| <b>Total</b>                          | <b>100.0%</b>   | <b>100.0%</b>   | <b>100.0%</b>   | <b>100.0%</b>      | <b>20,085</b>      |

Reason for Denial:

|                       |               |               |               |               |              |
|-----------------------|---------------|---------------|---------------|---------------|--------------|
| DTI                   | 30.9%         | 38.5%         | 27.9%         | 34.7%         | 1,750        |
| FICO                  | 37.2%         | 28.0%         | 29.4%         | 29.9%         | 1,505        |
| Bankruptcy history    | 13.0%         | 12.0%         | 6.7%          | 11.9%         | 601          |
| Judgments/collections | 17.7%         | 20.7%         | 33.5%         | 21.8%         | 1,098        |
| Other                 | 1.2%          | 0.8%          | 2.4%          | 1.7%          | 86           |
| <b>Total</b>          | <b>100.0%</b> | <b>100.0%</b> | <b>100.0%</b> | <b>100.0%</b> | <b>5,040</b> |

# Portfolio Status – Loans Issued through 3/31/2015



| <u>Loan Type</u> | <u>FY 10-11</u> | <u>FY 11-12</u> | <u>FY 12-13</u> | <u>FY 13-14</u> | <u>FY 14-15</u> | <u>Grand Total</u> |
|------------------|-----------------|-----------------|-----------------|-----------------|-----------------|--------------------|
| On-Bill          |                 |                 |                 |                 | \$15,032,33     | \$30,908,20        |
| Recovery         |                 |                 | \$7,643,125     | \$8,232,743     | 6               | 3                  |
| Smart Energy     | \$1,155,23      | \$10,834,07     | \$9,808,606     | \$11,348,30     | \$21,602,31     | \$54,748,53        |
|                  | 1               | 9               | 6               | 6               | 4               | 6                  |
| Grand Total      | \$1,155,23      | \$10,834,07     | \$17,451,73     | \$19,581,04     | \$36,634,65     | \$85,656,73        |
|                  | 1               | 9               | 1               | 9               | 0               | 9                  |

# Portfolio Status – Repayment History through 3/31/15

|                     | <u>Avg</u>  | <u>Avg</u> | <u>Loans</u>  | <u>Avg</u>  | <u>Avg</u> | <u>Payment</u>  | <u>Outstandin</u> | <u>g</u>       | <u>Delinquent</u> | <u>Loan</u>      | <u>% of</u>      | <u>Loan</u>  | <u>% of</u>      |
|---------------------|-------------|------------|---------------|-------------|------------|-----------------|-------------------|----------------|-------------------|------------------|------------------|--------------|------------------|
|                     | <u>FICO</u> | <u>DTI</u> | <u>Issued</u> | <u>Term</u> | <u>Age</u> | <u>Remainin</u> | <u>g</u>          | <u>Balance</u> | <u>Loan</u>       | <u>% of</u>      | <u>Default</u>   | <u>Loans</u> | <u>Annual</u>    |
|                     |             |            |               |             |            | <u>g</u>        | <u>Balance</u>    | <u>Amount</u>  | <u>Bal</u>        | <u>Chargeoff</u> | <u>Chargeoff</u> | <u>ff</u>    | <u>Chargeoff</u> |
|                     |             |            |               |             |            |                 |                   |                |                   |                  |                  |              | <u>%</u>         |
| <u>Underwriting</u> |             |            |               |             |            |                 |                   |                |                   |                  |                  |              |                  |
|                     |             |            | \$75,910,99   |             |            |                 | \$64,785,3        |                |                   |                  |                  |              |                  |
| Tier 1              | 752         | 29%        | 2             | 160.4       | 25.3       | 135.1           | 43                | \$2,719,386    | 4.2%              | \$817,136        | 1.1%             | 0.5%         |                  |
|                     |             |            |               |             |            |                 | \$8,711,43        |                |                   |                  |                  |              |                  |
| Tier 2              | 709         | 64%        | \$9,745,747   | 168.4       | 19.8       | 148.6           | 6                 | \$432,181      | 5.0%              | \$138,013        | 1.4%             | 0.9%         |                  |
|                     |             |            | \$85,656,73   |             |            |                 | \$73,496,7        |                |                   |                  |                  |              |                  |
| Grand Total         | 747         | 33%        | 9             | 161.3       | 24.6       | 136.7           | 79                | \$3,151,568    | 4.3%              | \$955,149        | 1.1%             | 0.5%         |                  |
| <u>Loan Type</u>    |             |            |               |             |            |                 |                   |                |                   |                  |                  |              |                  |
| On-Bill             |             |            | \$30,908,20   |             |            |                 | \$28,178,9        |                |                   |                  |                  |              |                  |
| Recovery            | 751         | 33%        | 3             | 174.8       | 18.3       | 156.4           | 00                | \$2,432,296    | 8.6%              | \$372,484        | 1.2%             | 0.8%         |                  |
|                     |             |            | \$54,748,53   |             |            |                 | \$45,317,8        |                |                   |                  |                  |              |                  |
| Smart Energy        | 745         | 34%        | 6             | 154.9       | 27.6       | 127.3           | 79                | \$719,272      | 1.6%              | \$582,665        | 1.1%             | 0.5%         |                  |
|                     |             |            | \$85,656,73   |             |            |                 | \$73,496,7        |                |                   |                  |                  |              |                  |
| Grand Total         | 747         | 33%        | 9             | 161.3       | 24.6       | 136.7           | 79                | \$3,151,568    | 4.3%              | \$955,149        | 1.1%             | 0.5%         |                  |

# Lessons Learned

- Subordination problematic for secondary markets financing
- Utility deferred payment arrangement and subordination lengthening repayment term
  - 1.4% of loans issued on DPA
- Ownership verification (required to file declaration) results in slower approval process
- Transferability moderately successful
  - 133 loans(5.1%) pre-paid prior to maturity vs. 21 loans (.9%) transferred
- Current cost effectiveness rules slow down approval and limit project eligibility
- Speed of loan and project approval critical
  - Working to improve contractor portal for project/financing approval integration
  - EFS improving loan underwriting – auto decisioning; third-party income estimator for DTI calculation

# Contact

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“No one cares how much you know,  
until they know how much you care”.

-Theodore Roosevelt



**H.E.L.P.**

Home Energy Lending Program

# [need]

a condition requiring supply or relief:

**Rural Electric Cooperatives serve in 93% of what the  
USDA defines as “persistent poverty counties.”**

# [help]

to provide what is necessary to accomplish a task; to relieve someone in need, sickness, pain or distress:

**Energy cost savings through On bill finance or On bill recovery EE programs HELP enables low income households pay for things like food, medicine, clothing and other basic needs.**





**Ouachita Electric  
Cooperative Corporation**

Your Touchstone Energy<sup>®</sup>  
Partner



**H.E.L.P.**

Home Energy Lending Program

- Created/Piloted for Ouachita Electric Coop in 2013
- Has many customizable features
- Leverages 10% Loan Loss Reserve admin by AEO
- Pre/post smart meter data is part of EM&V tool kit
- Trained Coop staff provide 100% on site QC
- Supports a network of trained Service Providers
- HELP Service Providers are certified by RESNET
- RESNET certification provided thru JobWerks
- Designed to scale Nationally
- Turn Key program that is EASY for Coop to offer;  
EASY for Coop member to participate
- HELP's the families who need EE the most!!

# Utility Co. Eligibility

- Created for Electric Cooperatives
- Smart Meters in use and/or will be included in program
- Willingness to Share / Monitor actual Post HELP “Intervention” Results



# Member Eligibility

- Home Owner (loans are not tied to meter- homeowner signs promissory note)
- Renters (renter pays monthly loan amount but landlord must sign promissory note – 6 month “freeze” of loan payment portion when property is vacant)
- Good Payment History (as determined by Co-op)
- Pre screened and qualified using cost vs. sq ft analysis (need based)



- Coops are independent!!
- Customizable Features = Participation!
- Boards make the decisions = Participation!
- Pace program growth per budget = Participation!

# HELP Features



- Arkansas energy office provides 10% LLR for OBF/OBR
- “Unsecured” low interest loans ranging from 2.5% to 4%
- No disconnect for failure to pay loan
- length of loan estimated on front end, BUT is recalibrated after 100% QC performed by trained Coop staff
- Ensures that the savings pay for the work being done



- Contractors rewarded for quantifiable results
- Ensures quality work that lasts
- Establishes trust in the market
- Paves the way for word-of-mouth marketing
- Creates demand for program
- HELP’s the demographic of families who need energy efficiency interventions the most

In the southern region, “Core” measures financed include:



- Attic Insulation
- Air Sealing
- Duct Sealing
- Lighting

- Avg. HELP Core Loans are \$3,000
- Homes are typically 1500-1700 sq ft
- Avg. estimated payback is 5.5 Years



- Loan amortization is finalized after work is complete . This ensures cash flow is neutral or positive for member going forward
- Each COOP can determine max loan amt and length. HVAC is allowable if Coop desires

# Performance



- 75% - 80% Conversion Rates are typical
- 311 Loans as of 5/1
- ZERO Loan Defaults as of 5/1
- 5 AR Coops Offering HELP By End of 2015
- 2 additional AR Coops will offer HELP in 2016

## SCALABILITY

- more LLR and/or other loan default risk mitigation
- Expanding HELP Certified Service Provider Network **vv**
- Smart meter informed EMV Tools further developed **vv**
- Software Co-Developed with RESNET, EEtility and others **vv**



Key



**H.E.L.P.**

Home Energy Lending Program

**Questions?**

**Thank You!**  
**Tammy Agard**  
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**EETility**  
THE HELP PEOPLE.



Better Buildings Summit, May 28, 2015  
Energy Efficiency Financing  
**Frank Spasaro**



# CALIFORNIA Electric and Gas Utility Service Territories





# Energy Efficiency Financing Products: Market Characteristics and Potential

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Harcourt Brown Energy & Finance  
November 2010

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# “Current” EE Finance Programs, CA

## » Existing Programs:

- OBF, since 2006
- American Recovery and Reinvestment Act (ARRA)
- California Energy Commission (CEC)
- Regional Energy Networks (RENs)
- Property Assessed Clean Energy (PACE)
- Other EE finance programs (e.g. PowerSaver)

## » New Pilots

# OBF Program Design: 2013-2014 Program Overview

- » Businesses only; easy credit (billing history)
- » Customers receive both an OBF loan and a rebate/incentive from an energy efficiency program
- » Energy savings covers the loan installment
- » **Zero-percent interest, unsecured, non-transferable**
- » Minimum loan \$5,000  
Maximum \$100,000 / \$250,000 / \$1,000,000
- » Monthly loan payment is included on the utility bill
- » Loan Default = Meter shut-off

# OBF Process (basic steps)

- » Customer contacts Utility
- » Utility performs credit check / project review
- » Loan Agreement issued / signed / release to install
- » Project is installed
- » Final documents submitted to Utility
- » Post-inspection performed
- » Adjustment Letter
- » Loan Issued
- » Billing begins

# OBF Program Data

## California Statewide On Bill Financing Activities by Market Segments

As of December 31, 2014

|               | PG&E       |                 | SoCal Edison |                 | SDG&E      |                 | SoCal Gas  |                 | Total      |                 |
|---------------|------------|-----------------|--------------|-----------------|------------|-----------------|------------|-----------------|------------|-----------------|
|               | # of Loans | Loan Amt Issued | # of Loans   | Loan Amt Issued | # of Loans | Loan Amt Issued | # of Loans | Loan Amt Issued | # of Loans | Loan Amt Issued |
| Agricultural  | 22         | \$1,567,769     | 5            | \$73,683        | 10         | \$496,762       | 13         | \$579,069       | 50         | \$2,717,283     |
| Commercial    | 778        | \$25,042,003    | 1,168        | \$22,042,084    | 1,128      | \$26,950,095    | 11         | \$183,096       | 3,085      | \$74,217,277    |
| Industrial    | 18         | \$577,390       | 54           | \$1,903,509     | 77         | \$2,973,148     | 11         | \$582,200       | 160        | \$6,036,247     |
| Institutional | 152        | \$14,091,433    | 181          | \$12,224,863    | 201        | \$15,085,037    | 12         | \$1,335,701     | 546        | \$42,737,034    |
| Multi-Family  | 1          | \$48,053        | 0            | \$0             | 2          | \$26,775        | 3          | \$49,765        | 6          | \$124,593       |
| Total         | 971        | \$41,326,648    | 1,408        | \$36,244,139    | 1,418      | \$45,531,817    | 50         | \$2,729,831     | 3,847      | \$125,832,435   |

# *On-Bill Financing (OBF): Lessons Learned*

- » OBF works! Encourages EE and defaults are low
- » Internal support need
- » Communication and understanding what OBF is and isn't
- » Working with vendors/contractors
- » The up-front funding "gap"
- » Comprehensiveness of projects
- » Natural gas-only projects
- » Government (State and local)
- » Credit / risk management
- » IT/Billing systems upgrades
- » Understanding applicable laws/regulations

# *On-Bill Financing (OBF): Lessons Learned*

- » *Advantages:* straightforward; easy to fit with other utility EE programs; inexpensive capital typically; convenience and comfort for borrower; low default rate
- » *Disadvantages:* doesn't leverage ratepayer funds with private funds; ratepayers/utility own the risk; utilities serve as “banks”; utilities may be regulated as banks

# EE Financing Pilots

- » Regulatory Guidance/Background
- » Key Differences: OBF vs. OBR
- » Description of Pilots
- » Timeline
- » Lessons Learned





# Regulatory Guidance/Background

- » CPUC issued May 2012 “Guidance Decision”:
  - Finance a “resource” program
  - OBF (to go away, or be limited)
  - Established Finance Pilots:
    - “on-bill *repayment*” programs
    - Allows for Credit Enhancements
    - Funded at \$75 million for two years
  - Funded continuation of certain ARRA finance programs
- » CPUC Finance Decision (Sept 2013)
- » Plus several other Rulings and Resolutions

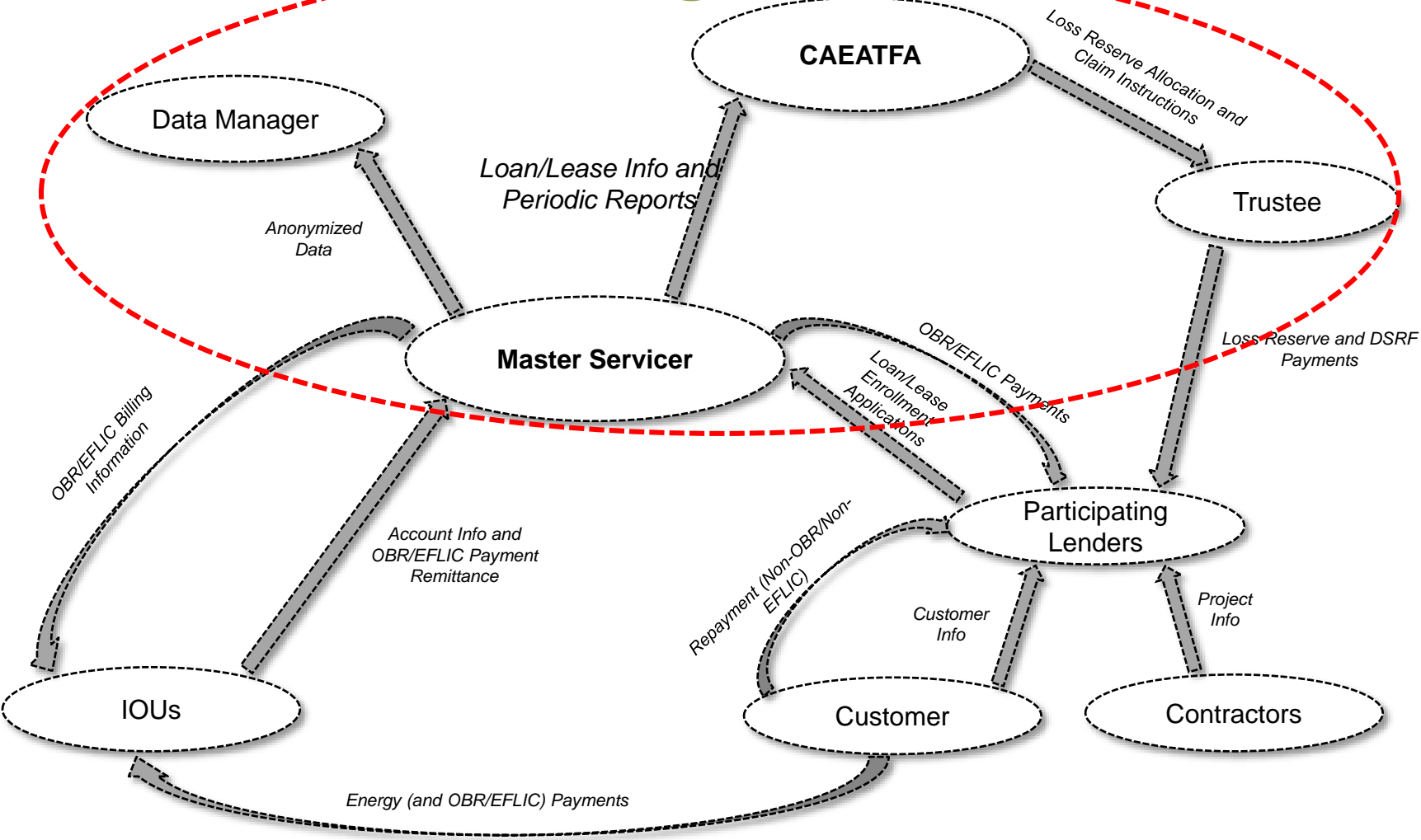
# Finance Pilots – Goals

- » Attract private capital to support energy efficiency investments, by leveraging the additional security created through use of the utility bill to service energy efficiency financing
- » Improve interest rates and other terms under which financial institutions offer energy efficiency financing to customers
- » Enable more customers to qualify for energy efficiency financing than would otherwise be possible, and explore if OBR reduces delinquency/defaults.
  - **“The primary goal of the OBR pilots is to test whether the combined single bill payment can overcome lending barriers in the non-residential sector, and attract large pools of accessible private [i.e. non-governmental, non-utility] capital to the markets.” (CPUC Decision 13-09-044)**

# The Pilots – Overview

| Sector          | Pilot Type                        | Credit Enhancements                                 | On-Bill Repayment                | Disconnection  |
|-----------------|-----------------------------------|---|----------------------------------|--|
| Residential     | Single Family                     | \$21 million Loan Loss Reserve                      | Optional in PG&E territory       | No   |
|                 | Master Metered Multifamily        | \$2 million Loan Loss Reserve, Debt Service Reserve | Yes                              | No   |
| Non-Residential | Small Business Loan/Lease         | \$10 million Loan/Lease Loss Reserve                | Loans – Yes<br>Leases – Optional | Loans -- Yes<br>OBR Leases -- Yes<br>Off-Bill Leases -- No |
|                 | Non-Residential On-Bill Repayment | None  | Yes                              | Yes  |

# California Hub for Energy Efficiency Financing



# Single Family Loan Program

- Residential Energy Efficiency Lending (“REEL”) Program
- Goal: help customers access lower-cost financing for energy efficiency projects by reducing risk to participating lenders
- Available to lenders such as banks, credit unions, CDFIs, and other finance companies
- Provides a loan loss reserve to cover loans for residential (1-4 units) energy efficiency projects such as:
  - Simple appliance or HVAC replacements
  - Comprehensive home energy improvements
- Customers are not required to participate in an IOU efficiency rebate or incentive program

# REEL: Key Features

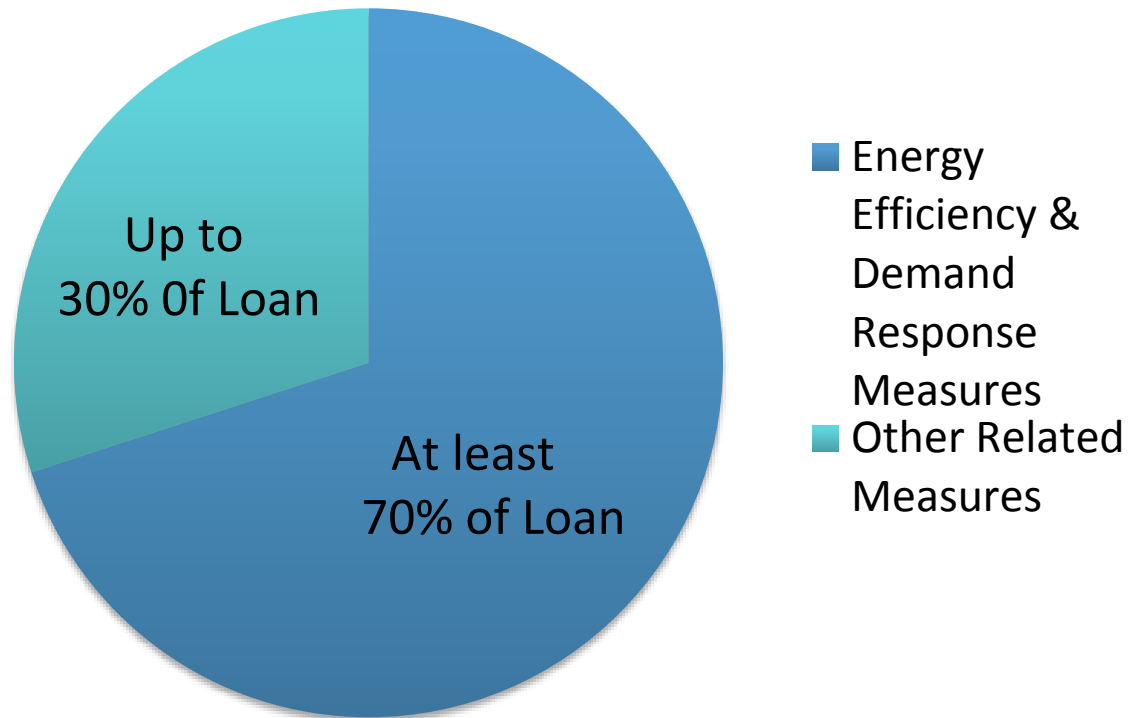
- Loan Loss Reserve:
  - Contribute **11%** of principal value to reserve for each enrollment
  - Contribute **20%** for low-to-moderate income (LMI) borrowers
  - Reimbursement of up to **90%** of charged-off principal, based on lender's reserve balance
  - \$10,000 initial contribution upon first loan enrollment to reduce early stage risk
  - Reserves capped at percentage of the outstanding portfolio
- **No fees** to lenders for participation or access to credit enhancement
- Contractor management system for high-quality projects and customer satisfaction
- Launch in **Q2 2015**

# REEL: Eligible Loans and Minimum Underwriting Criteria

- Eligible properties include:
  - Single family homes (1-4 unit properties)
  - Located in the service territory of a California IOU
  - Rental properties allowed with landlord consent
- Loans must be term loans and may not include prepayment penalties
  - No lines of credit or refinancing of existing debt
- Retail installment contracts/dealer loans are eligible
- Maximum loan amount: \$50,000 per unit; 35,000\* for borrowers with no FICO score, regardless of number of units
- Maximum loan interest rate: 10-year Treasury + 750 bps, as of the first business day of the applicable calendar quarter. The maximum interest rate for the first quarter of 2015 is 9.62%.
- Minimum FICO: 580
- Income verification required for FICOs between 580 and 640
- Maximum debt-to-income: 55%

# REEL: Eligible Measures

- » Loans enrolled with the Program may finance energy efficiency and demand response measures as well as other, related measures as follows:





# Other Considerations

- » Data Requirements
  - Borrower / Loan / Project
- » Loan-Loss Reserve structure
- » Contractor Management
- » Timeline

# Finance Pilots: “Lessons Learned”

- The Financial Community is Interested
- OBR is COMPLICATED! Many delays
- “Jury” hasn’t convened:
  - Billing System modifications, \$/time/timing
  - Savings potential, still TBD
  - Determining eligible measures, 70-30 rule
  - Marketing, Education & Outreach
  - Contractor Management
  - Program results
  - Data
- *Stay tuned!*



**THANK YOU!**

Frank Spasaro ([fspasaro@semprautilities.com](mailto:fspasaro@semprautilities.com))