On-Bill Repayment

A Model for Large Scale Implementation

EDF
ENVIRONMENTAL DEFENSE FUND™
Finding the ways that work

On-Bill *Finance*: How it Works Today

- Loan for qualifying energy efficiency or renewable energy projects made **by** utility
- Repayment made through monthly utility bill
  - Threat of shutoff improves credit quality
  - Liability travels with the meter – no acceleration
- Current programs tend to be utility funded and underwritten
  - Limited size and eligibility

On-Bill *Repayment*: EDF Proposal

- Commercial lenders are likely better equipped to underwrite and fund loans
  - Utility is a payment conduit – Similar to Visa
- Projects originated by contractors
  - Verification by municipal construction inspectors and/or utility
- Projects required to yield net monthly savings
  - Debt service less than energy savings
- Scale and standardization can reduce costs
- PUCs will likely require lender to piggyback utility shutoff procedures
  - Partial payments will be split pro rata between utility and lender

On-Bill Repayment – Who Does What

	Originate Project	Execute Project	Underwrite Customer	Provide Capital	Collect Payments/ Loan Service
Existing On-Bill Programs	Utility	Contractor	Utility	Utility	Utility
Proposed On-Bill Program	Project Developer (SolarCity)	Contractor or Project Developer	Lender (Bank)	Lender (Bank)	Utility

- Existing OBF programs require utilities to extend beyond their core competencies
  - Expensive and inefficient

- Utilities will need to be fully compensated for the resources they provide

On-Bill Repayment Example – Step by Step

The Key Players

- Jane Homeowner – Suburban homeowner with $350 monthly average utility bill (gas plus electric)
- Utility – Jane's utility for gas and electric
- SolarCity – A leading project developer of residential solar and energy efficiency projects
- Credit Union – A local financial institution

Jane, Utility, SolarCity and Bank are being used in this example as representatives of potential participants. Neither Jane nor any of these firms has committed to actually participating in this program nor have they opined that these terms are reasonable.

On-Bill Repayment Example – Step by Step (continued)

Step 1: Design

- SolarCity visits Jane's home to conduct energy audit and discuss options
- SolarCity designs program for Jane that will reduce monthly utility bill by $225 to $125 per month
  - Solar panels
  - Envelope
  - HVAC

On-Bill Repayment Example – Step by Step (continued)

Step 2: Apply for Credit

- SolarCity helps Jane prepare a credit application for the $20,000 cost of project
- Credit application approved by credit union
  - 15-year term at 6.25%
  - Monthly payment of $170

Step 3 Install and Inspect

- SolarCity installs project
- 3rd party inspector confirms proper installation and that savings will meet or exceed estimates

On-Bill Repayment Example – Step by Step (continued)

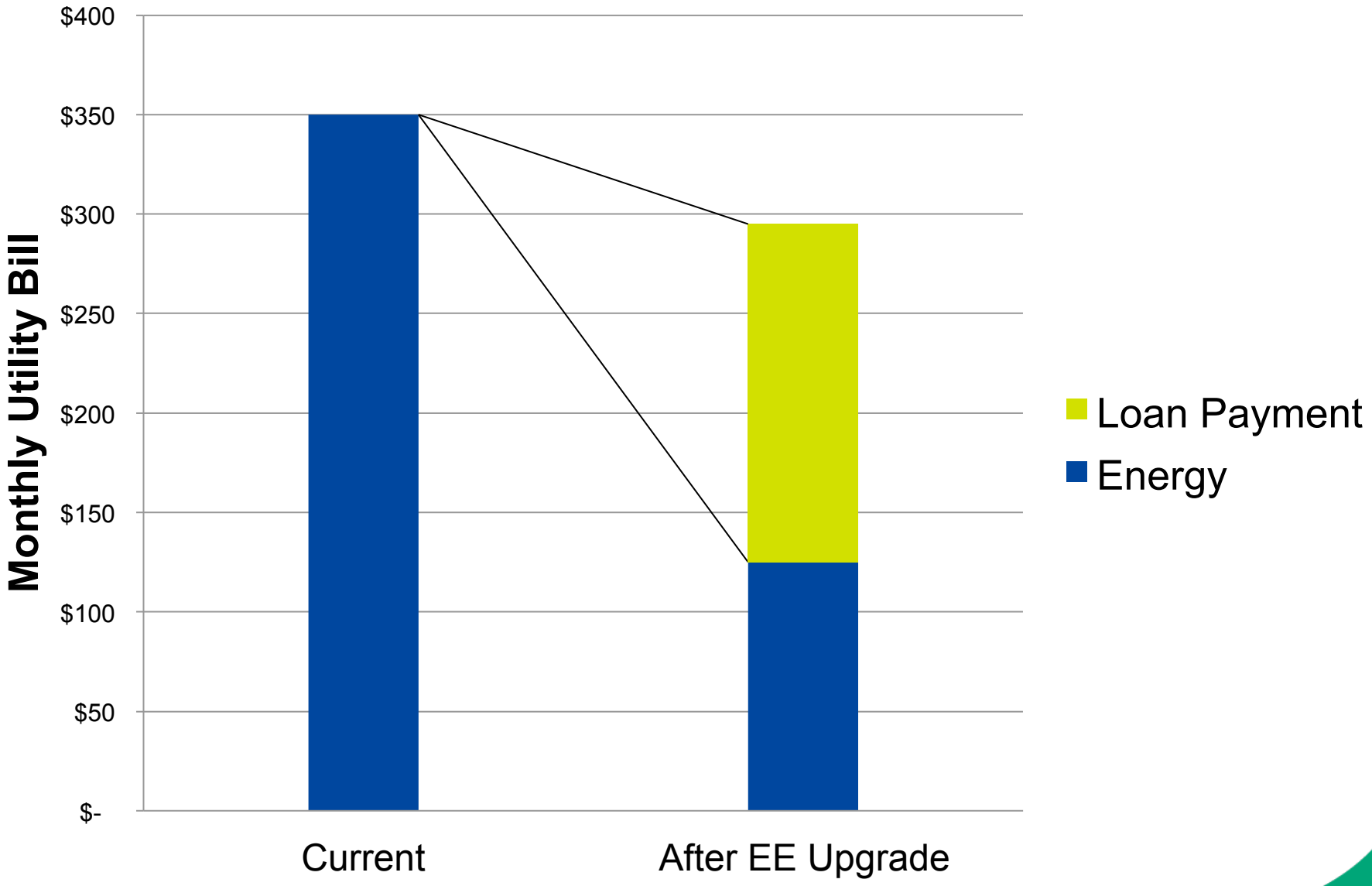
Step 4: Disbursement

- Credit Union pays $20,000 to SolarCity

Step 5: Ongoing Payments

- Jane's new PG&E bill is for $125 of energy costs and $170 of debt service or $295 per month
  - $55 of monthly savings
  - The $170 portion of bill is not subject to increases and will terminate in 15 years
- PG&E processes $295 payment and remits $170 to Bank less a processing fee to cover costs

OBR Lowers Net Utility Bill



Example – Key Issues

- This example is only one way that transactions can be executed
- A properly designed program could allow for wide variety of building types, contractors and lenders
- Inspectors could be state, local or private sector (HERS Raters)
- Repayment obligation is tied to meter, not occupant
- Incomplete bill payments apply proportionally to line items on bill

Significant Program Flexibility

- Variety of buildings
  - Single family
  - Multi family
  - Commercial
  - Public
- Variety of transaction types
  - Loans
  - Leases
  - Energy Service Agreements (ESAs)
- Variety of projects
  - Retrofits
  - Renewable Electricity Generation/CHP
  - Energy Star Appliances

Benefits

- No direct costs to taxpayers or ratepayers
- Creates jobs
- Reduced carbon emissions
- Beneficial to ratepayers through avoided cost of new generation capacity and reduced use of higher cost generation
- Beneficial to utility shareholders through payment processing fees and/or improved performance of utility EE programs

EDF estimates that a statewide OBR program in California could generate annual investment of $2.7 in residential EE and renewable projects, create 20,000 installation jobs and, after 5 years, reduce annual CO2 emissions by 7 million tons.

Thank you!

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