

**Racine Energy Efficiency Program
Manual**

April 2010

**Center on Wisconsin Strategy
for
City of Racine
Department of City Development**

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1.0 Program purpose

The Racine Energy Efficiency Pilot (REEP) is an example of a Property Assessed Clean Energy (PACE) program, a recent innovation among local governments seeking to:

- Reduce energy use in buildings.
- Reduce energy costs in buildings.
- Create local jobs in energy efficiency.
- Maintain a pool of funds for ongoing work in energy efficiency.

The project provides an attractive offer for building owners in the city: It pays for cost-effective energy efficiency measures, without credit checks or liens. Because the measures are cost-effective, customers should see a positive cash flow while enjoying updated systems and more comfortable indoor spaces. And, with minor exceptions, should they leave the building while still in repayment, the payments transfer to the next owner. More details on the thinking behind this offer is available at <http://www.ecw.org/publicpowerguidebook/COWSFinancingPaper.pdf>.

The project works alongside existing state, federal and utility efficiency programs. Customers who qualify for existing tax credits and other subsidies and incentives may still take advantage of these. REEP covers the often large part of the customer's costs that are not subsidized.

Unlike subsidy programs, REEP has income from customer repayment, so it will be able to finance additional efficiency improvements in the future.

REEP is launched in 2010, and will be available to owner-occupied single-family and duplex homes constructed from 1946 through 1975. (See authorizing resolution in appendix.) Home-owners may apply at www.retrofitracine.org.

2.0 Procedure

This list describes the process from application to the end of payments. See Figure 2.1 for a graphical view.

1. A prospective customer submits an application to the Department of City Development.
2. The department reviews the applicant for age of structure, payment status on city billings, energy consumption, and other criteria it may develop. If the applicant qualifies for the program, the department collects a \$25 fee and sends the contact information to an energy efficiency rater.
3. The rater conducts an in-person rating, and sends the results to the department.
4. The department enters results into a cost-benefit spreadsheet to identify all cost-neutral or better measures.
5. The department contacts contractors who may bid on the project, and posts the job on the city's Web site for other potential bidders.

6. The department selects a preferred bid and uses the costs to prepare an offer letter, stating the proposed measures, their costs, the expected energy savings and a payment schedule. The department and customer decide on a final package, and the customer accepts the offer – formally a work contract with the contractor and a financing agreement with the city.

7. The city's loan review board reviews the package before closing.

8. When the city and customer have both signed the loan contract, the department notifies the contractor, and the contractor sets a work schedule with the customer.

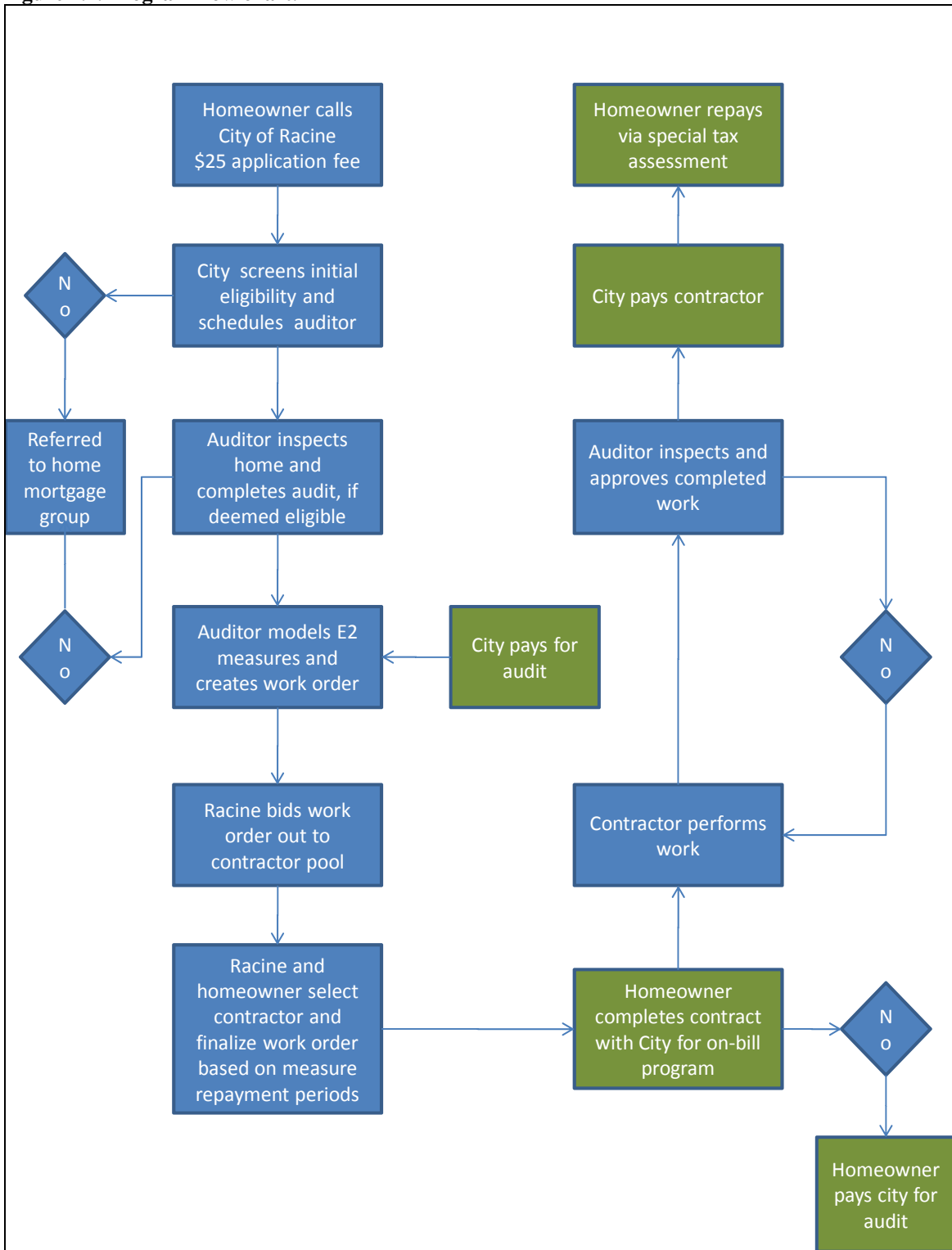
9. When work is completed the contractor invoices the department, which pays the bill. The department issues a coupon book or establishes automatic deposits with the customer's bank account. The payment stream is formally recorded as an annual "special charge" for up to 10 years.

10. The customer makes monthly payments.

Arrears. If the customer is more than four months in arrears, the department may put an unpaid balance for a year on the succeeding year's property tax bill. If the customer sells the property, she must either pay the remaining balance before closing or notify both the new owner and the department of the transfer of obligation.

Focus on Energy. The amount financed for each house must meet cost-benefit and length of term requirements, so in general it will be beneficial to deduct anticipated Focus rebates from the project cost. For this to occur, 1) the customer must agree to have rebates sent to the contractor, 2) the contractor must show on the invoice a total cost, a rebate amount and the amount billed to the customer, and 3) the assessor must indicate to Focus that the rebate should be sent to the contractor.

Figure 2.1. Program flow chart.



3.0 The revolving fund.

REEP's initial capitalization is approximately \$500,000. The program will charge the equivalent of 3 percent APR on its financing. Part of the initial fund is borrowed and will be repaid. The balance of the fund will be used for additional EE financing as it returns to the city from REEP customers.

4.0 Customer qualification

1. House is owner-occupied.
2. House was built 1946-1975.
3. Owner has no overdue property tax.
4. Owner has no overdue municipal services.
5. Total energy bill > \$1,700 per year.

5.0 Measure qualification

Basic measure qualification will be through an in-person audit with REM/Rate software. The audit will evaluate air leakage, HVAC efficiency, water heater fuel type and efficiency, refrigerator plug load, showerheads, windows, and light fixtures. Rating results will be entered into a spreadsheet to account for interest rates and payback periods, producing a checklist of qualified measures.

In addition, toilets will be evaluated as follows, based on number of people in the household and the age or water draw of the existing commode. Toilet data may be collected during the assessment or directly from the homeowner.

Toilet savings estimate at 2009 utility rates

Number of toilets in use (do not count toilets infrequently used) _____ (N)

Number of residents _____ (R)

Water capacity* of toilet No.1 _____ (A)

Water capacity* of toilet No. 2 _____ (B)

Water capacity* of toilet No. 3 _____ (C)

Annual savings by replacing three toilets with 1.6-gallon toilets = $[(A-1.6)*5(R/N)+(B-1.6*5(R/N)+(C-1.6*5(R/N))*365*\$.0051]$

Annual savings for WaterSense toilets, with < 1.28 gallons per flush, can be calculated by substituting 1.28 or the actual gpf rating for 1.6 in the equation above.

* Newer toilets have stamps near the seat that give capacity. If the toilet does not have such a stamp, two methods can be used to determine capacity:

1) Check the underside of the tank lid or the back wall inside the tank for a date stamp. If none is present, ask the owner if he/she can estimate the date of installation. For 1982 and earlier, assume 5 gallons per flush. For 1983-1993, assume 3.5 gallons per flush. Toilets made since 1994 should be stamped as 1.6 gpf.

2) If date of manufacture cannot be determined, or if the toilet is very old and may be using more than 5 gallons per flush, check the water usage directly. Turn off the water to the toilet. Note the water level in the tank; if necessary mark it with a pencil. Empty the tank by flushing. Using a gallon container, fill the tank with tap water, counting the number of gallon, until the water level line is reached.

6.0 Contractor qualification

The program seeks to provide good, locally based jobs for contractors and their employees. At the outset, the program is too small to require that contractors meet many new requirements, but if the program grows, some criteria may be added. As of 2010 criteria for participation are:

1. Listing on the Focus on Energy Website as a trade ally doing business in Racine County.
2. Place of business within 20 miles of downtown Racine (may be waived if insufficient number of contractors qualifies).
3. Certification that all workers receive at least \$12 an hour while for REEP jobs, without docking pay for non-REEP jobs.

7.0 Forms

7.1 Program handout



SAVE GREEN AND GO GREEN WITH REEP

The Racine Energy Efficiency Program, or REEP, pays the upfront cost to retrofit your home, drastically increasing its energy efficiency. You then pay the investment off from the savings, and if you move, the new owner can pick up the payments. It's an easy way to cut your utility bills and reduce pollution!

Save money. Insulation, heating system improvements and other upgrades can cut costs for home energy and water use by 25 percent or more. For a homeowner with \$2,500 in annual utility bills, that's \$625 a year!

Improve comfort. While you're spending less, you'll be enjoying your home more with better temperature control and fewer drafty spots.

Reduce pollution. Electricity in our area comes mainly from coal burning, which puts mercury, soot, greenhouse gases and other substances into our air and water. Natural gas creates fewer, but still important, emissions. Even water has environmental impacts, as it takes energy to treat and pump it. An efficient house is a green house.

Strengthen the community. Efficiency improvements support local contractors and their employees.

How it works

The program is available to homeowners in the city of Racine who meet these criteria:

1. The home was built from 1946 to 1975.
2. The homeowner is also the occupant (rentals do not qualify).
3. The homeowner has no overdue property taxes or other city bills.
4. Utility bills are at least \$1,700 a year.

There is no credit check or conventional loan application procedure, though REEP reserves the right to adjust the list of criteria as the program grows.

If you qualify to participate, REEP will assess your house for energy and water savings opportunities.

The assessment will identify cost-effective upgrades or replacements that REEP could finance. These may include insulation, air sealing, the heating system, the water heater, the refrigerator, lighting fixtures, showerheads and toilets.

REEP makes getting the work done easy by advertising your job with participating contractors and sharing their estimates with you. You sign a contract to have the work done, and REEP will pay the contractor. You repay REEP in monthly payments.

Because REEP finances cost-effective upgrades, from Day One your savings from reduced energy and water use should be greater than your payments back to REEP. REEP cannot absolutely guarantee net savings, however, because we cannot control how you use your house. REEP's savings projection is based on an established rating system with a built-in safety factor—we estimate savings based on current utility rates. When energy and water prices rise, so will your savings.

Your payment term will be determined by the costs and savings involved, but it will not be longer than 10 years. Should you sell your house during that time, payment will automatically transfer to the new owner, who will receive the benefit of the improvements, unless you pay the balance at sale. If you fall behind on your payments, the annual amount due may be collected with your property tax.

Some improvements may qualify for tax credits or rebates from the Wisconsin Focus on Energy program. Tax credits are up to you to compute, but REEP is working with Focus to use the rebates to directly lower the cost of your project, so your monthly payments are lower or the term is shorter.

When your payment term is over, the improvements are yours.

Getting started

To apply, fill out a short form and submit it with a \$25 application fee. If you don't qualify for REEP, the fee will be refunded.

You can get an application:

- At www.retrofitracine.org (click "Sign Up").
- By calling 262.636.9197.
- By stopping by the Housing Department, City Hall Room 102, 730 Washington Avenue.

My house doesn't qualify

REEP is launching as a pilot in 2010. With limited funds largely from the American Recovery and Reinvestment (Stimulus) Act, it is targeting houses in an age range that are likely to need upgrades and unlikely to be in districts where other assistance is available. If the program continues and grows, it may include other homes—and businesses as well.

Questions? Call 262.636.9197.



REEP is an innovative project of the city of Racine, with assistance from the Center on Wisconsin Strategy (COWS) at UW-Madison and the Delta Institute in Chicago.

7.2 Customer application



RACINE ENERGY EFFICIENCY PROGRAM

The Racine Energy Efficiency Program (REEP) offers upfront financing for energy- and water-saving improvements in homes located in the city of Racine. It is available to owner-occupied houses built from 1946 to 1975, and it covers such efficiency measures as insulation, air sealing, furnaces, water heaters, refrigerators and toilets. Homeowners pay for those improvements over a period of years, but payments will be less than estimated savings on energy and water. If a homeowner moves while payments are due, the subsequent owner – who gets the benefit of the improvements – takes over the obligation, unless you make other arrangements in the course of the sale.

To apply, fill out the form on the back of this sheet and send it with a check for \$25 made out to the City of Racine Housing Department.

Your home will be pre-screened for eligibility. As part of this screening, REEP will review your energy and water billings to help determine if improvements will be able to save money. If the house is not eligible, the application fee will be refunded. If it is eligible, REEP will notify a home auditor, who will set up an appointment to assess your home. Assessments take about two hours.

Following the assessment, REEP will review the findings with contractors and present you with cost-effective improvements. You are encouraged to install all of the identified measures, but in some cases you may be able to choose some but not others. In general, the project must cost at least \$1,000 to move forward.

After you agree on the project, you will sign a work order with the contractor and a financing agreement with REEP. After the work is finished and you begin to enjoy the benefits, you will repay the loan through monthly payments. Prospective buyers of your house will see that you are in the program, much as they would if you had a special assessment for sidewalk repairs.

Participation in REEP may qualify you for rebates from the Wisconsin Focus on Energy program (www.focusonenergy.com). All of REEP's home auditors and contractors are certified to do work under that program. The auditor who visits your house can provide more information about these rebates. In addition, many improvements currently qualify for income tax credits. Consult the IRS or other tax resource for more information.

REEP application

Name(s): _____

Property address: _____

Mailing address (if different): _____

Approximate year of construction: _____

Approximate size of home (square feet, if known): _____

Number of bedrooms: _____

Number of current occupants: _____ adults and _____ children under 18

What is the heating fuel (gas, electricity, wood, etc.)? _____

What is the water-heating fuel? _____

How many toilets? _____

Approximate year toilets were installed: _____

Approximate year refrigerator was manufactured: _____

I have enclosed a \$25 REEP enrollment fee. Should my house not qualify for an audit, I will receive a refund. If I qualify, I agree to set and keep an appointment with an auditor to facilitate the energy assessment. I give REEP permission to review my energy and water utility billings.

Signature Date

Return to:

Racine Energy Efficiency Program
City of Racine Housing Department
730 Washington Avenue, Room 102
Racine, WI 53403

7.3 Offer letter

Dear _____:

Thank you for participating in the Racine Energy Efficiency Program (REEP). We have received the report of your home's assessment, which identified likely cost-effective efficiency measures. We have solicited proposals from contractors to obtain exact prices. Your home qualifies for the following upgrades:

- Air sealing
- Attic insulation
- Wall insulation
- Foundation/ring joist/basement insulation
- Furnace replacement
- Water heater replacement
- Refrigerator replacement
- Showerhead replacement
- Lighting improvement
- Toilet replacement
- Other _____

We estimate the savings from those measures to average \$____ a month at current utility rates, and your payments would be \$____ a month for ____ months. In addition, you may qualify for rebates from the Wisconsin Focus on Energy program and/or income tax credits. Should you sell your house during the payback period, payments can transfer to the next owner.

We encourage you to take advantage of all of these opportunities, to create the most comfortable home environment and to reduce long-term costs. We will call you soon to go over the offer and to answer any questions, or you may call us at XXX-XXXX.

Sincerely,

7.3 Contract for financing

7.4 Contractor certification letter

I certify that employees engaged in work under the Racine Energy Efficiency Program (REEP) will be paid at least \$12 an hour for the time they are on those jobs, and their pay for other jobs will not be reduced as a result. Failure to abide by this rule may disqualify my firm from future REEP work.

Signature

Date

Name of firm

Address

City, State, Zip

8.0 Appendix

8.1 Authorizing resolution



City of Racine

Legislative File Number Res.09-1552 (version A)

Alderman Holding

Resolution establishing a home weatherization and energy efficiency loan pilot program

Whereas, the Wisconsin Legislature by 2009 Wisconsin Act 11 provided authority for cities to make loans to residents for improvements to residents' residential property for energy efficiency or renewable energy projects and for the loans to be repaid through special charges upon the property; and

Whereas, such a program can improve the quality of housing in Racine and make housing more affordable by reducing energy expense.

Now, therefore, be it resolved, that there is hereby established a loan program for loans to residents for improvements to residents' residential property for energy efficiency or renewable energy projects.

Further resolved, that the program shall have the following characteristics and eligibility criteria:

- a. The program is limited to improvements which increase the energy efficiency and/or reduce consumption of non-renewable energy in homes. Only improvements with efficacy demonstrated by an energy audit are eligible.
- b. Owner-occupied single-family and duplex homes constructed from 1946 through 1975 are eligible for participation in the program.
- c. The program is not restricted on the basis of owner or household income. The owner shall agree to the collection of loan repayment through a special charge upon the property; monthly repayments in lieu of the special charge are allowed.
- d. Loans shall be made at three percent interest; loan term should match the payback period of the energy savings resulting from the improvement as nearly as possible.
- e. Participation in this program shall not disqualify the property from participation in any other home improvement or energy efficiency program for which it may qualify.

Further resolved, that Housing Department shall administer the program, subject to standards and procedures adopted by the Loan Board of Review. The Loan Board of Review shall approve or disapprove applications for loans under the program.

Further resolved, that the Finance Director is authorized and directed to establish accounts within the revolving loan fund for the program. Initial funding for the program is provided by the transfer of \$200,000 from the 812 account in the housing program revolving loan fund and \$159,000 in Energy Efficiency and Conservation Block Grant funds when received from the U.S. Department of Energy. Any additional grants received for the program or program income shall be deposited in the accounts established pursuant to this resolution.

Fiscal Note: Funding is available as proposed in the resolution.

8.2 Wisconsin Act 11 (2009)

Under Wisconsin law (WisStat §66.0627), local governments have long been able to collect the costs of snow removal, trash pickup, and other services to property owners through a “special charge” on their municipal services bill. Failure to pay such charge has enabled the government to put the unpaid balance on the owner’s property taxes. Failure to pay those triggers a lien on the property and possible seizure.

Recently, the city of Milwaukee and the Center on Wisconsin Strategy proposed using such municipal special charge power to recover costs for the energy efficiency services. The law governing special charges, however, precluded their use for “installment payments” (WisStat §66.0627(d)).

The Legislature in 2009 has changed this law, at least for residential properties, carving out an exception for installment payments for efficiency services and giving cities the option of putting the special charge directly on the property tax bill. 2009 Wisconsin Act 11, passed May 15, 2009, and in effect May 18, reads in part:

SECTION 6. 66.0627 (title) of the statutes is amended to read:

66.0627 (title) Special charges for current services and energy efficiency improvement loans.

SECTION 8. 66.0627 (1) (a) of the statutes is created to read:

66.0627 (1) (a) “Energy efficiency improvement” means an improvement to a residential premises that reduces the usage of energy, or increases the efficiency of energy usage, at the premises.

SECTION 9. 66.0627 (1) (b) of the statutes is created to read:

66.0627 (1) (b) “Political subdivision” means a city, village, town, or county.

SECTION 11. 66.0627 (8) of the statutes is created to read:

66.0627 (8) A political subdivision may make a loan to a resident of the political subdivision for making or installing an energy efficiency improvement or a renewable resource application to the resident’s residential property. If a political subdivision makes such a loan, the political subdivision may collect the loan repayment as a special charge under this section. Notwithstanding the provisions of sub. (4), a special charge imposed under this subsection may be collected in installments and may be included in the current or next tax roll for collection and settlement under ch.74 even if the special charge is not delinquent.

This means that for a \$5,000 REEP project, the program could bill to the property \$41.66 per month for 10 years. As with a special charge for trash removal, the billing would transfer from owner to owner for as long as a balance was outstanding. REEP could also put repayment on annual property tax bills, but it intends to do this only for overdue accounts. Property owners could satisfy their obligation at any time, including time of sale, by paying their outstanding balance.