



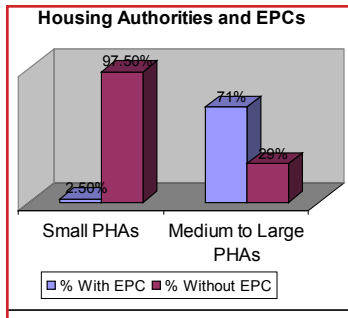
# Eco Wise



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## Self-Directed Energy Performance Contracts - Ideal for Small PHAs

Of the almost 3,000 small and very small (499 units or less) Public Housing Authorities (PHAs) nationwide, only 68 report involvement in an EPC, self-directed or otherwise. More than one-third of all large and very large PHAs are in some phase of an EPC. ESCOs are more likely to get involved with larger projects, because larger projects offer more savings opportunities, but small projects offer savings as well. Sometimes ESCOs will get involved with small PHAs if utility rates are very high and very significant improvements are in order.



Rahway Housing Authority (RHA) in New Jersey (276 units in six developments) embarked on its own self-directed EPC that resulted in three great improvements: 1) reduced annual energy bills by over \$150 per unit/year, 2) reduced overtime and maintenance costs and, 3) sped up unit turnover with redirected maintenance labor resulting in increased rent revenues. Ithaca and Mechanicville HAs in New York, with 341 and 160 units respectively, are two more small PHAs embarking on self-directed EPCs.

Rahway's EPC included appliance and lighting upgrades, improved building controls, windows, heating and hot water systems, water-saving fixtures, increased insulation and some HVAC duct sealing. After nine years, the reduced energy bills will pay for all improvements, leaving three years of pure savings before the loan period is over.

Self-directed EPCs make a lot of sense for PHAs of all sizes, but particularly for PHAs under 500 units that are on scattered sites. RHA's Executive Director, Kenneth Pushko, recommends a self-directed EPC if the loan for utilities improvements will be less than \$750,000. PHA staff workload must be flexible, and staff must have at least moderate construction administration experience and a high level of interest about the EPC process.

Start [here](#) to get familiar with HUD's streamlined EPC procedure. Whether yours is self-directed or ESCO-driven, you will need three years of utility consumption history, you'll need to know your utility rates, and you'll need to know your building. What's old and what's fairly new? What works and what doesn't?

### Financing

Once you've decided to implement some Energy Conservation Measures (ECMs), approach local banks first for loans. Use any new equipment (even toilets) as collateral. Tax exempt PHA status can lower interest rates 25 percent, from 6 percent to 4.5 percent in today's market.

If you're modernizing units, use money available through the [Capital Fund Financing Program](#) (CFFP). CFFP can pay for new cabinets in the kitchen, while the energy loan covers low flow faucets, [ENERGY STAR appliances](#) and maybe even new windows. The same contractor can perform all the work.

Don't forget to look into utility, state and federal [rebate programs](#) that can pay you back for [weatherization](#) and other improvements that affect energy efficiency.

### Monitoring the Project

Pushko points out that **self-directed means self-disciplined**. PHA staff is responsible for arranging financing, overseeing improvements and monitoring the resulting building performance, which means they become more familiar with processes and equipment than they normally would be. That results in a better-operating PHA.

Use internal controls to verify the effectiveness of your upgrades. A comprehensive data collection process and monthly bar graphs documenting energy and water usage and related costs will show you what is working and what needs attention. Keep track of how the buildings are performing compared to the predicted savings that were used to get the loans.

A self-directed EPC may be more work for staff, but will result in better, more affordable housing and, ultimately smoother operation for staff and residents. If ESCOs aren't interested, smaller PHAs can roll up their sleeves and dig in to potential energy savings on their own.

PHAs embarking on self-directed EPCs should remember, self-directed means self-disciplined. Tracking costs and savings shows you what is working, and what needs attention.

## This Issue

### The EPC Issue

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- Events & Training
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- Maintenance Corner: Improving Building Performance on Your Own
- Self-Directed vs. ESCO-Managed EPCs

### Events & Training

[15th Annual San Francisco Affordable Housing Conference](#)  
September 10 - 11  
San Francisco, CA

[2008 National Healthy Homes Conference](#)  
September 15-17  
Baltimore, MD

[Multi Housing World](#)  
September 17-19  
Denver, CO

[Greening Existing Buildings](#)  
September 25  
Washington, DC

[ASES National Solar Homes Tour](#)  
October 4  
Nationwide

[WaterSmart Innovations Conference and Expo](#)  
October 8-10  
Las Vegas, NV

[EEBA 2008 Excellence in Building Conference and Expo](#)  
October 21-23  
Phoenix, AZ

[Enterprise Community Conference: Transforming & Redefining Community Development](#)  
November 19-21  
Baltimore, MD

[EcoBuild Fall](#)  
December 8-11  
Washington, DC

## Denver HA Discusses EPC

As highlighted in the [July edition of EcoWise](#), [Denver Housing Authority](#) (DHA) is wrapping up the construction phase of an ambitious \$16 million EPC projected to generate \$1.8 million in annual savings. EcoWise interviewed Intergovernmental & Community Affairs Officer, Stella Madrid, and her staff at DHA to get some idea of what's involved in an ESCO-managed EPC.



DHA Family Development (380 units) – One of the first family developments completely modernized under the EPC.

**EcoWise:** When did DHA decide to pursue an EPC and what were the first steps?

**DHA:** We became interested at a HUD conference in 2004, but at first it didn't look like energy conservation measures would be cost effective. As energy costs increased, an EPC became a good option. We issued an RFP and procured an ESCO.

**EcoWise:** How did you handle financing?

**DHA:** The EPC by itself provides moderately straightforward financing—over a 12-year period in our case--and an experienced ESCO can help you navigate the details. Essentially, HUD lets housing authorities use money that would otherwise be used to pay utility bills to pay debt service to finance energy efficiency improvements. The improvements last considerably

longer than the financing, so all parties come out ahead. Our financing became complex because we decided to use the EPC financing in conjunction with tax credits and Capital Fund Financing. Since some of the EPC improvements replaced items that would have been repaired (in a non-green manner) using Capital Funds, we were able to reduce our Capital Fund expenditures. This leaves more money for future improvements. Combining the financial sources in this manner generated approximately \$6 million in additional funding for the project.

**EcoWise:** Building managers and residents have attended trainings throughout the EPC process. How have they responded?

**DHA:** The majority of our residents feel they are now part of the "Energy Crisis" solution and are excited to participate. Property site managers and maintenance staff have embraced this initiative as cost efficient under the new asset management models.

**EcoWise:** What has been the most challenging part of the implementation process this past year?

**DHA:** Resident awareness. We used written notices/brochures, door-to-door contact and Local Resident Council (LRC) meetings at every property to inform residents of the upcoming EPC process. The residents in turn provided valuable feedback on comfort issues.

**EcoWise:** The most rewarding?

**DHA:** The most rewarding is the accomplishment as one of the Rocky Mountains' largest public housing agencies taking the lead in large scale energy conservation efforts and maximizing our federal resources. Our other accomplishments have yet to be realized, but we anticipate measureable energy efficiencies, positive impacts on affected property project budgets and long-term increased resident awareness of conservation efforts and the role they play.

For a full list of Energy Conservation Measures (ECMs) read the [original press release](#).

For more information, contact [Stella Madrid](#).

### Tips for Maintenance Staff

### Self-Directed versus ESCO-Managed EPCs

#### Self-Directed

- Lower costs- no overhead & profit
- Leverages in-house capability and capacity
- Better integration with Capital Funds and asset management strategies
- Increased staff knowledge of operating systems
- Solution for small agencies

#### ESCO-Managed

- One Stop Shop of expertise and responsibility
- Assistance with HUD EPC protocols, incentives and submissions
- Reduced project risk - guaranteed savings
- Minimal costs until energy savings accrue
- Post-installation monitoring, reporting and training

This monthly e-mail update is brought to you by HUD's Public Housing Environmental and Conservation Clearinghouse (PHECC) featuring news and resources to help agencies manage energy and water costs.

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[PHECC Energy Performance Contracting](#) information page

[PHECC Resident Education Resources](#)

[HUD Residential Energy Use Benchmarking Tool](#)

[HUD Residential Water Use Benchmarking Tool](#)

[Lessons Learned](#) from Mechanicville, Ithica and Utica, NY Self-directed EPCs

**New Resource!** [ACEE New State Energy Efficiency Policy Database](#)

One-stop shopping for PHAs seeking information about State energy efficiency policies

### Maintenance Corner: Improve Building Performance on your Own

There are plenty of ways to improve the energy and water efficiency of your properties without entering into an EPC.

**Benchmark your building-** [Benchmarking](#) is the first step in reducing water and energy use. Benchmarking highlights properties that use more resources than similar buildings, and gives you a place to focus. Benchmarking also puts you on track to monitor building performance so you can document the results of your efforts.

**Change out the lights-** [Lighting](#) accounts for 10% of household energy use. Almost all EPCs include lighting efficiency upgrades.

- Install [compact fluorescent bulbs](#) in any screw-in fixtures that aren't on a dimmer switch.
- Replace any T-12 fluorescent tubes with the more efficient T-8s that fit into the same fixture.
- When replacing fixtures, get ones that are T-5 compatible.
- Install photocells in common areas so lights are on only when the space is in use.
- Choose [LED exit signs](#).

**Install faucet aerators and low-flow showerheads-** These save water, and the energy used to pump and heat that water. Installation is straightforward and savings are immediate. If you're replacing faucets or toilets, look for EPA [WaterSense](#) labeled products.

**Appliances-** When replacing appliances, choose [ENERGY STAR](#).

**Resident Education** - An energy efficiency campaign at Fort Lewis military base in Washington State achieved 10 percent gas and electricity reduction by distributing cartoons with conservation storylines, children's activities and print materials showing progressive energy savings. Educational sessions also give residents a chance to get involved, and to voice any concerns.

Email us with your Maintenance Corner questions at [pheccinfo@nelrod.com](mailto:pheccinfo@nelrod.com).