The Pay-As-You-Save™ (PAYS®) System
Presentation to Electricity & Consumer Affairs Committees
Denver, CO -- July 27, 2003

I. Introduction

A. **(Overhead 1)** Hello, my name is Harlan Lachman. I'm Co-Executive Director of PAYS America, a new non-profit providing research and education about the Pay-As-You-Save or PAYS system. PAYS America wants to help develop and implement a national market infrastructure to stimulate the purchase of cost-effective, resource-efficiency products using the PAYS system. Until we receive our 501-C3 designation, our fiscal sponsor is ACEEE.

B. The Pay-As-You-Save or PAYS system was first described in the Energy Efficiency Institute's December 1999 paper prepared for NARUC's ERE Committee. I wrote this paper with my partner, and fellow Co-Executive Director, Paul A. Cillo.

1. **(Overhead 2)** PAYS enables building owners or tenants to purchase and install money saving, resource efficiency products with no up-front payment and no debt-obligation. Those who get the savings pay for these products through a tariffed charge on their utility bill, but only for as long as they occupy the premises where the products were installed.

2. PAYS is a new system that enables consumers to realize our country's enormous untapped resource-efficiency potential. The PAYS infrastructure can stimulate investment in electric, gas and water efficiency. One version of PAYS is now being piloted by two utilities in New Hampshire.

C. I'm going to take you through a brief presentation about how PAYS works and a bit about the NH pilots and then will open up for questions and comments.

II. PAYS

A. PAYS Description (10 minutes)

1. PAYS provides a way to package off-the-shelf, cost-effective, resource-efficiency technologies and services as desirable products that consumers will buy and pay for.

2. PAYS is <u>not</u> intended for new, unproven technologies. Instead, it is intended to give consumers a new way to buy proven efficiency technologies so they can save money.

3. Even though we developed PAYS as a way to address barriers that have limited consumer interest in buying energy efficiency technologies, PAYS is also appropriate for any cost effective resource-efficiency measure as I will explain to the Water Conservation Committee on Tuesday.

4. **(Overhead 3)** PAYS products require a new market infrastructure that has three key elements:

a) A tariff that assigns repayment of measure costs to the meter location where the measure was installed -- not to an individual customer.

b) Billing and payment through a charge on the distribution utility bill with disconnection for non-payment.

c) Independent certification that products and installation are appropriate and that estimated savings will exceed payments -- so customers get immediate net savings.

5. This new market infrastructure allows for easy payment and consumer assurances:

a) The PAYS infrastructure stimulates the creation of consumer products that have not been offered before -- products with no up-front payment, no obligation to pay when benefits cease, no debt-obligation, and savings estimates certified by an independent third party.

b) We like to use home mortgages as an example of the type of effect a new infrastructure can have on consumers:

(1) The mortgage infrastructure includes title searches, rate schedules, disclosures, debt to income ratios, property valuation, coupon books, foreclosure rules, Fannie Mae, and secondary markets. These have all evolved to support a vibrant home mortgage system for purchasing homes.

(2) Without this infrastructure, banks would not make loans and most consumers would not have the up-front money they need to buy a home. And, the home building industry would not be able to help drive our economy.

6. The PAYS market infrastructure could have a similar impact. From a consumer's point of view, PAYS products are efficiency technologies packaged so that consumers can immediately lower their bills and pay only as long as they personally benefit from these measures.

B. PAYS also solves the split incentive problem:

1. Landlords have little incentive to invest in their properties to reduce their tenants' utility bills.

2. Tenants have no incentive to invest in a landlord's property not knowing how long they will live there.

3. The result is that nothing happens and that tenants pay higher utility bills than they need to.

4. PAYS allows tenants to improve the efficiency of the space they occupy and pay only as long as they remain at that location.

C. **(Overhead 4)** The question that I am here to discuss with you is: Are consumers better off with PAYS?

1. First of all, PAYS eliminates a significant amount of the risk that consumers typically face when they purchase efficiency products.

a) They get access to certified products -- someone the consumer trusts verifies savings claims and appropriateness before consumers pay for PAYS products.

b) Consumers have assurance that they'll pay only as long as they personally benefit from the measures.

(1) If they leave the premises, for any reason, they stop paying.

(2) If the product fails: they don't have to pay.

c) They pay nothing up-front and there is no loan or lien; no debt-obligation; no credit check.

(1) Charges are on the distribution utility bill so that the person who gets savings pays.

(2) Charges stay with meter until they're paid off; disclosure by the owner to successive customers ensures customers learn of their PAYS obligations.

2. PAYS creates the potential for unlimited capital for consumers to invest in efficiency projects:

a) Programs that rely on incentives to stimulate markets require limited public dollars or system benefits funds.

(1) When these funds are used up; consumers stop investing in resource efficiency.

(2) The problem is that when consumers don't invest in cost-effective, efficiency products, they pay more money for utilities than they need to and society loses the opportunity to protect limited resources.

b) PAYS does not rely on incentives to stimulate markets.

(1) Ideally, projects would be funded by the vendors and manufacturers who will benefit from increased sales.

(2) However, until PAYS becomes more mature -- a reliable source of capital will be needed to pay for up-front costs.

(a) Third party capitalists, such as insurance companies, seeking a new reliable cash stream at market rates, could provide the up-front costs for PAYS products.

(b) States can issue a bond, creating low cost money.

(c) For a limited pilot, ratepayer-funded, revolving-loan funds could be used.

3. Most importantly, however, is that PAYS lowers the consumer's total utility bill!

a) PAYS charges are allowed only when verified estimates show that the customer's savings are higher than the charge.

b) This makes more cash available to customers and makes it easier for customers to pay their bills.

D. (**Overhead 5**) This brings us to the question of disconnection for non-payment.

1. To encourage states to issue bonds, capital providers to make capital available, or vendors to finance installation of their products, in other words, to create an

unlimited fund available for consumers to purchase efficiency products, the repayment stream must be reliable:

a) Currently, reliable repayment of loans requires liens that can lead to foreclosure or repossession if repayment is not made.

b) Reliable payment of a utility tariff requires disconnection if payment is not made.

E. If we want consumers to have access to PAYS' benefits, consumers have to take-on some additional risk related to disconnection.

F. Let's discuss for a minute how PAYS would affect disconnection, particularly for residential customers.

1. PAYS charges are unlike any other charges.

a) The greater the PAYS charge the lower the customer's utility costs.

b) Whenever a PAYS charge is a substantial part of a customer's bill, it is offset by an even greater savings in the customer's utility costs.

2. We have often been asked whether consumers should be disconnected if they pay all their other utility charges but not their PAYS charge?

a) Consumers do not typically target one portion of their bill to not pay.

b) More commonly, consumers pay late or pay part of the total they owe.

(1) PAYS and other portions of the bill are all collected together,

(2) PAYS charges are a fraction of the total bill,

c) Someone would have to be angry with the program to withhold paying just the PAYS charge,

(1) It makes no sense to withold payment for charges that are actually helping to save a consumer money.

(2) Such anger, if it occured, would likely indicate an individual problem that can and should be rectified.

d) We have actual experience with on-the-bill charges both with and without disconnection for non-payment.

e) In Texas, weatherization programs used copayments. Even after retraining staff to explain how program continuation required collecting co-payments, repayment rates with no disconnection for non-payment barely exceeded 50%. A Vermont utility, the Burlington Electric Department (BED), operated a program with this same measures. Customers started asking, "Do we have to pay these charges?" BED staff answered, "Yes." Then customers responded, "If we don't, will we be disconnected?" BED decided that if it really wanted these charges repaid, it had to treat its charges for these same measures the same as its other charges, in other words with disconnection for non-payment. BED had better than a 97% repayment rate.

f) Disconnection for non-payment is required, just as it is for any other utility tariff, if we expect customers to make their payments for PAYS measures.

G. **(Overhead 6)** Some other possible questions:

1. Would PAYS charges accelerate the date for disconnection?
   a) Probably not.
   b) For electric-only measures, the total electric bill, including the PAYS charge, would be lower. That should have the effect of actually pushing back the disconnection date.
   c) When electric and non-electric measures are combined on the electric bill, the electric bill will likely increase. However, since the consumer's total utility bills will be lower, the consumer will have more cash to pay all their bills, including their electric bills.
2. Would the PAYS charge open the door for the electric bill to be used for all sorts of non-energy purchases?
   a) These are regulated utility charges so limits can be set.
   b) PAYS must be a state-mandated, resource-efficiency program since regulator approval is required for the infrastructure to exist. The difference is that PAYS can operate without subsidies for measures.
   c) The PAYS market infrastructure is needed because the private market isn't and can't do this without this new infrastructure.
3. Another question is: How does disclosure work?
   a) The purchasing customer signs a purchase agreement.
   b) If the customer is a tenant, the landlord also signs an agreement.
   c) The agreement requires the owner to disclose the PAYS obligation to the next owner or tenant with a prescribed form. As a back-up, the utility notifies customers when they sign up for service.
   d) There are penalties for non-disclosure to protect new occupants.

H. As I mentioned earlier, there is a PAYS pilot project underway in NH. I want to give you a quick overview of what's going on there.

1. (**Overhead 7**) There are two Pilot Programs in operation:
   a) Public Service of New Hampshire (PSNH) - serving municipal customers.
   b) The New Hampshire Electric Coop (NHEC) - serving all customers, with a focus on smaller customers.
2. PSNH's pilot started up in January 2002 and the Coop's started in June of that year.
3. Both pilots are utility-run rather than market driven:
   a) Both utilities front the money for measures.
   b) Both utilities certify all measures.
   c) Both utilities oversee installation.
4. The two utilities use different systems for paying for measures.

a) Both are allowed to use up to 10% of their System Benefits Funding.

b) PSNH set-up a revolving loan fund using their SBC funds.

c) NHEC uses its SBC funds as a guarantee fund in order to leverage capital that they borrow so they can borrow 10 times the SBC amount set aside for PAYS.

(1) This is the model we recommend. Available ratepayer funds are used to protect customers who make investments that benefit society but don't work out. Guaranteeing the repayment stream will lower the cost of capital to pay the up-front costs for projects. This will result in more projects being cost effective.

5. On August 7, 2001 in Order 23,758, the NH Public Utilities Commission authorized disconnection for non-payment and charges to "run with the meter"

6. (**Overhead 8**) Results to date:

a) PSNH as of April 24th reported that:

(1) 82 projects submitted from more than 25 towns.

(2) Total cost of projects $865,457. PSNH overhead during the first year was only $86K.

(3) 25 projects have been completed, 15 were in progress and 42 were awaiting Town or PSNH approval .

(4) The average project cost was $10,554.

b) (**Overhead 9**) Let's take a look at PSNH's first project:

(1) Town of Stratford did a street lighting change-out.

(2) $13,050 was needed to change and relocate 58 fixtures.

(3) The annual savings were $6,292.

(4) The project pays for itself in just over two years, BUT...

(5) "We could not have done it without PAYS!"

(6) Not a loan, but a utility bill:

(a) Did not require voter approval.

(b) In fact, voter approval was impossible. Despite robust savings; voters had turned down this project just a few years before.

7. (**Overhead 10**) NHEC - treats PAYS as a service for members:

a) NHEC advertises "Why pay now when you can pay as you save?"

b) NHEC had one market-driven component.

(1) This option was a PAYS Point of Purchase compact fluorescent light or CFL program.

(2) The utility's only role is to certify the vendor and bill and collect PAYS charges. The vendor markets CFLs, sells them, is responsible for all program paperwork, and handles all warranty issues.

c) The problem with the NHEC pilot is that customers are forced to choose between subsidies of 30-85% and PAYS products. Few participants will pass up such generous subsidies.

d) (**Overhead 11**) The Co-op's biggest PAYS project was written up in the Co-op's March 2003 Newsletter:

(1) A health club in Lincoln NH replaced its air handling system.

(a) The club has saved $800 per month on its electric bill and about $166 a month on avoided maintenance for the outdated air handling system.

(b) The club pays only $530 a month for a net monthly savings on its utility bill of $270 and a total monthly savings of more than $430.

8. (**Overhead 12**) So what have we learned from these PAYS pilot efforts:

a) PAYS is working largely as expected.

b) Vendors are interested in offering products. At PSNH, even though PSNH must certify all measures and PSNH designed its pilot so that its staff would bring projects to towns, vendors have marketed 25% of all projects.

c) Utilities can handle bill payment issues. $100,000 was budgeted for PSNH billing modifications. However, the entire start up cost, including training and marketing and revisions to the billing system, were only 32,265.

d) PAYS does overcome barriers.

(1) Customers with audits who can't or don't take action now do.

(2) Government agencies who have financing or voter approval issues now implement projects.

(3) PAYS does have the potential to overcome split incentives.

e) And required paybacks don't "scare off" customers.

f) These utilities PAYS' pilot programs have also surfaced some issues:

(1) Having IOUs serve as both the capital provider and certifying agent limits the number of measures to much less than demand. This was great for a pilot but takes away the market driven nature of PAYS.

(2) "It's not a mortgage, not a loan, it's a PAYS product!"

9. Before we open up the discussion, I'd like to put out an invitation.

10. PAYS is new and still developing. New Hampshire is the only state so far where PAYS products are being sold.

11. Any PAYS program in another state will require setting up a new state infrastructure. If any of you want to become actively involved in the development of PAYS, you will have an opportunity to help shape the design

of that infrastructure to best meet the needs of consumers. My contact information is included in the handout that will be distributed.

I. Are there any questions or comments? (*If a residential example is requested, use compact fluorescent light (CFL) Overhead. Emphasize the market-driven nature of this program. The utility's only role was to certify the vendor and then bill and collect PAYS charges. The vendor handled all other program functions including marketing, verifying customers, inventory, notifying the utility, warranty, and records keeping. Customers paid just $0.25 per month per CFL for 24 months. If their CFL stopped working, they got a new CFL at no cost. If they used their CFL an average of four hours per day, their net savings would be $0.27 per month – twice their monthly fee. If the CFL lasted its rated 8,000 hour life, their net savings would be $32.40*)