

TO: Low-Income Consumer Advisory Task Force

FROM: Chris Strand

DATE: May 19, 2015

SUBJECT: Recommendations for Task Force Consideration on May 29

Members,

I am submitting 8 strategies for your consideration at our next meeting, and am asking that they be placed on the agenda for discussion.

Whenever possible, I have tried to estimate the problems, benefits, and budgetary implications of each strategy.

Thanks for your attention.

- 1. Target Specific Electric End Use**
- 2. On Bill Financing with Rebates**
- 3. City-Financed Loan/Lease Program with Rebates**
- 4. Incentives to Replace HVAC in Older Apartment Units**
- 5. Utilize Existing HPw/ES Contractors**
- 6. Appropriate and Equitable Spending on Low-Income Weatherization**
- 7. Multi-Family Demand Meter**
- 8. Targeted Marketing/Dedicated Staff for Rental Dwellings**

1. Strategy: Target Specific Electric End Use

Recommendation: Give away LED light bulbs. Provide rebates and low interest loans for refrigerators built before 2001 and energy efficient window A/C units.

Description: One of the problems with Austin Energy's Free Weatherization program is that it saves relatively little energy, and does so at a high cost per home. It was the only conservation program in Austin Energy that did not pass the Utility Benefit/Cost test in 2014. Most low and moderate income consumers use as little electricity as they can because they are constrained by cost. Their electric consumption is often concentrated on specific end uses, predominantly lighting, refrigerators and cooling. LEDs use about 14% of the electricity used by incandescents, and are becoming inexpensive enough to give away or sell at greatly reduced cost. A typical refrigerator built before 2001 uses approx. 850 kWh a year compared to a new energy efficient model that uses 425 kWh. Window A/C units cool in zones and eliminate the energy lost in ductwork. They cost significantly less to purchase and operate than central systems. They are often turned off when not in use, as opposed to central units which are tied to a thermostat. The cost to purchase and install 3 window A/C units (one for the living area and one for each bedroom) is less than half the cost of a central unit).

Precedents: Many utilities, including Austin, have given away free CFLs as promotional items and have rebate and loan programs.

Estimated Cost: The cost depends on the equipment, and the scope and design of the program/s. A pilot cost of \$600,000 is envisioned; this does not include staff time.

2. Strategy: On Bill Financing with Rebates

Recommendation: Austin Energy finances energy efficiency retrofits with repayment on the monthly utility bill. A rebate would also be provided.

Description: On Bill Financing (OBF) charges for the retrofit of efficiency and renewables on the utility bill negating the need for a new power plant. To reduce the monthly cost to the resident and as an incentive to participate a rebate of approx. 20% of the cost of the retrofit would also be provided. On rental properties the terms of OBF would be structured so that the savings are equal to or greater than the expected electric bill before the retrofit. OBF may be the only effective tool to retrofit rental properties.

The vast majority of low and moderate income people in Austin are renters. Landlords have no incentive to replace HVAC systems or weatherize their properties since they do not pay the utility bills. (Under the existing Multi-Family Program rebates covering 80 -90% of the cost are offered and still it is difficult to get low income properties to participate). OBF allows expensive equipment to be amortized over the life of the unit, resulting in relatively low payments. If a tenant leaves, the next tenant picks up payments until loan payments are completed.

Precedents: States with utilities conducting some type of OBF program include AR, CA, CT, HI, KS, KY, NJ, NY, and SC. In Texas, Guadalupe Valley Electric Coop uses OBF to collect air conditioning service charges on the monthly bill. The Pedernales Electric Coop is developing an OBF program to finance PVs. Austin Energy's "Nightwatchman" program that leases lighting equipment as part of a security lighting electric rate goes back to 1979. This rate and program is similar to a number of utilities around the country.

Problems: Securing the loan from default is a concern. Similar to a bank loan program, some level of default must be assumed. (OBF programs across the country have experienced extremely low default rates) Unlike some states, Texas does not allow electricity to be cut off if the OBF part of the bill goes unpaid. Possible ways to compensate for default include: A) a lien on property; B) in cases of equipment such as HVAC and PVs, repossession or a separate meter could be installed, with disconnection justified by nonpayment of lease of services rather than non-payment of electric sales; C) a collection agency or legal collection process.

Tenants might have to sign a form that alerts them to their obligation to pay the loan.

Estimated Cost: Depending on how the financing is structured, the cost effectiveness should be less than or equal to AE's current financing program for home efficiency. Initial capital must be provided; \$500,000 is suggested for a pilot project. This does not include staff time.

3. Strategy: City-Financed Loan/Lease Program with Rebates

Recommendation: If On-Bill Financing is blocked for legal reasons, Austin Energy could reinitiate its home energy improvement loan that it operated in the early 1980s.

Precedents: The Austin program in the early 1980s used COA money as principal.

Problems: This would require two bills instead of one.

Tenants might have to sign a form that alerts them to their obligation to pay the loan or lease. As discussed in the On-Bill Financing strategy above, ways would have to be devised to deal with default.

Benefits: Similar to what is discussed in On Bill Financing strategy above.

Estimated Cost: Depending on how the financing is structured, the cost effectiveness should be less than or equal to AE's current financing program for home efficiency. Initial capital must be provided; \$500,000 is suggested for a pilot project. This does not include staff time.

4. Strategy: Incentives to Replace HVAC in Older Apartment Units

Recommendation: Provide significant rebates to replace HVAC equipment over 20 years old to the national energy code when ten or more units are replaced at a time.

Description: Austin has numerous multifamily buildings whose inefficient central air conditioners are more than 20 years old. Replacing these systems with units complying with the 2015 code could use up to 50% less energy. Once again because the landlord does not pay the bill these ozone-depleting systems are being repaired instead of being replaced. Austin Energy only rebates for systems that exceed the energy code. However, most apartments cannot accommodate these units because the indoor section is too large. Austin Energy could provide rebates based on peak demand savings based on the old units. This, in conjunction with On-Bill Financing or City-Financed Loan/Lease can provide a greater chance at retrofits.

Estimated Cost: It is suggested that up to \$300,000 be allotted for a pilot project in the near future.

5. Strategy: Utilize Existing HPw/ES Contractors

Recommendation: Send \$2200 voucher/rebate directly to low income single family residents

Description: Low income residents would receive an envelope from Austin Energy containing the following: 1) instructions 2) voucher/rebate with a maximum value of \$2500. 3) list of HPw/ES contractors 4) qualifying measures. The resident would then contact one or more of these contractors to perform the needed retrofits. Contractors would have a predetermined fixed price for their work with percentage post inspections and QAQC.

Benefits: Through the existing contract, AE has a limited number of contractors which makes it difficult to complete the amount of retrofits budgeted. Coordinating work with residents has been a challenge. Giving the resident power to drive the process frees up their time, staff time and should increase participation.

Precedents: Texas Gas Service presently utilizes a voucher like process to have furnaces and water heaters installed in low income residents.

6. Strategy: Appropriate and Equitable Spending on Low-Income Weatherization

Recommendation: Increase the amount of money spent on low income weatherization by directing 50% of the multi-family budget to complexes having a majority of low to moderate income residents. This would increase spending from \$2.1 million to \$3 million. Adjust spending on free weatherization so that over 60% of funds impact rental property. Limit spending to not exceed \$2200 per residence.

Description: The LICA Task Force has made preliminary recommendations to spend about \$3.7 million on low-income weatherization in the next fiscal year without prioritizing where that money is spent. This includes about \$2.1 million in this year's budget, plus another \$1.6 million that was budgeted but was spent on other programs in the prior 3 years. This proposal has several major problems.

1. The preliminary budget recommendation doesn't discuss where that money should be directed even though approximately 2/3 of low to moderate income families rent and only 1/3 own. Presently the vast majority of funds are spent on owner occupied housing.
2. To spend this amount of money without an overall budget increase would cripple the other residential efficiency programs unless money budgeted towards the multi-family program is utilized.
3. Low-income weatherization in Austin has very poor savings. During ARRA when many retrofits included new central HVAC and refrigerators spending averaged about \$3400 per home and the savings was only about \$57 per year. Those retrofits had paybacks of 55 to 60 years. Presently Austin Energy is spending about \$3300 per home, due in part to duct replacement. The average amount spent per home before the ARRA weatherization grants was \$1500 when ducts were repaired but not replaced. No payback analysis has been made.
4. It may be difficult to find this number of residences that are cost effective to weatherize.

To deal with these problems, and spend the money cost-effectively, this proposal suggests that: A) the increased funding be directed to some of the other proposals that have been previously discussed here; and B) all future free weatherization retrofits install only the most cost-effective measures.

Benefits: The programs described here will save more energy for targeted consumers.

Estimated Cost: This is described in some of the other strategies above.

7. Strategy: Multi-Family Demand Meter

Recommendation: Install demand meters on apartment complexes with over 4 units per building.

Description: Virtually all multifamily buildings in Austin are individually metered for electricity. This makes it more difficult for apartments to be retrofitted since the landlord does not pay the utility bill.

Virtually all utilities in the country have 2 meters for larger commercial customers. One is for energy, and the other is for peak demand, usually charging for the highest 15-minute period in year on each monthly bill. And this highest demand is usually charged whether or not that demand is used.

In Austin, the demand charged is an average of the highest 15-minute period in each of the 3 months on June, July, and August, and this stays in effect for the next 12 months of billing. All customers that use over 10 KW of demand have demand rates.

Providing it is technically feasible, installing peak demand meters on multifamily buildings can deflect some of the utility cost onto the landlord, providing a financial motivation to reduce energy.

Tenants would continue to be billed for energy charges through existing meters, *but at a lower rate*, while landlords would have to absorb demand costs like other larger commercial customers. Reducing demand charges would be a motivation to replace existing air conditioners with new, more efficient units. To a degree, this might also motivate investment in more efficient electric water heating and lighting.

Precedents: Taller apartments already have peak meters. In the past, Austin's building code has required individual meters on apartment building that were over 3 stories. Currently the code mandates individual meters in apartment buildings over 4 stories. Many apartment complexes also have common areas that are metered for peak demand.

Problems: This strategy will increase operation costs in many complexes. While the increase will not be outrageous, it will inevitably be opposed by apartment owners and managers. This strategy may need to be part of an electric rate case to establish a new rate class.

Benefits: Multiple complexes in Austin that have energy inefficient air conditioners that are 20 years old and older. (The expected life of a unit is typically 15 years.) These units are constantly repaired, adding greatly to maintenance. Units this old use R-22, an ozone-depleting refrigerant. This strategy may incent apartments to not only upgrade to efficient units, but to more environmentally benign refrigerants as well, while cutting down on yearly maintenance. The proposal is also market based. It does not rely on mandates, which will be even more opposed by apartment owners and managers.

Estimated Cost: The cost of the meter installation and reading will be absorbed by apartment owners and not Austin Energy customers. The additional cost per apartment unit will have to be divided by the number of units per meter in the building or complex. This will be billed to the landlord, with some portion passed on to the tenant. However, no *net increase* in tenant costs for electricity is foreseen because the tenants' bills will be lower.

8. Strategy: Targeted Marketing/Dedicated Staff for Rental Dwellings

Recommendation: Target market and have staff physically contact landlords.

Description: Rental buildings in Austin are individually metered for electricity. This makes it difficult for rental property to be retrofitted since the landlord does not pay the utility bill. This strategy will use target marketing and dedicate staff time to physically contact and meet with landlords to convince these owners to retrofit their buildings.

Problems: This market has always been difficult to penetrate. There is no assurance that targeted marketing and personal contact will make a huge difference.

Benefits: There is no assurance that a pilot program to reach this sector will *not* work either. Dedicated staff makes it more likely. As a rule, rental properties are less efficient than owner-occupied homes, so making increments in this sector may enhance energy savings for the utility.

Estimated Cost: This would require at least one dedicated staff person at Austin Energy CES. It is not known if this staff will need to be funded with a budget increase, or if the position can be allocated with existing personnel. It would also require marketing funds of at least \$50,000 for the first year.