

Suggestions and Comments Made for Use of REC Dollars  
And Proposals Provided at City Council Work Session  
March 21, 2016

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## Suggestions for use of REC dollars from Work Session Video, 3/21/2016

Tony Mealy: Reduce electric rates with REC dollars because rates are going up about 15% in 2016 from 2015.

Martin Buck: Applauds past councils' foresight for moving city off fossil fuels toward renewable fuels and for stewardship in getting City to this point. The money is more valuable, powerful collectively than it would be if returned to each ratepayer. I urge Council to consider the proposals to use these dollars to benefit all of us.

Carl McDaniel: Submitted a proposal for a solar garden (attached).

Sean Hayes: Asked Council to evaluate four possible approaches for the use of REC dollars, each with pros and cons, that he helped draft (attached). He suggested that specific proposals not be immediately selected but rather assess the process for doing so and the impact I believe we all are trying to achieve, namely benefit those most in need, to improve peoples living conditions, lower their energy costs permanently over temporary savings, and to achieve our goal of climate neutrality. I submit two proposals: 1) weatherize Oberlin homes at no charge to residents and 2) deliver substantial energy savings to churches, schools, government buildings, and businesses. The combined cost would be less than five million and leverage considerably more than that (proposals attached).

Centrilla Scott: Suggested the City adopt an opt-out investment program so people can elect not to participate and receive a payment.

Gene McKibben: By providing REC dollars to people the City is rewarding them for using energy thereby punishing those who reduce energy use and put in solar. By putting the money toward helping low-income people by reducing their energy use and putting in solar for them will benefit the entire community.

Heather Adleman: I am proud of Oberlin for addressing climate change through its Climate Action Plan, its Zero Waste Plan, its ongoing transition from coal based electricity to renewable energy based electricity and in the process raising of an immense amount of money. It is my strong recommendation that these funds be used for long-term, permanent improvements rather than minimal, short-term reductions in electricity rates. In response to Council's request for proposals, I set up a simple google form on Face Book for people to put forth their suggestions and circulated it widely in Oberlin. I received 24 suggestions and they are on a spreadsheet I am providing you (Attached are the 24 suggestions).

Maggie Robinson: I strongly urge Council members to reinvest REC dollar back into the community; into homes that can be weatherized, have energy use reduced, raise their values, make people more comfortable, and create jobs. Fixing these homes will have a long-term effect.

? Carter: It is his money. He wants it back.

David Orr: Do something long term. Steve has the numbers right, 85 and 15 but in wrong categories. The 85% should be kept in a community fund to do long-term energy projects that do the most for those in need and that creates jobs. Use 15% now, but keeping in

mind those with greatest need. Create a foundation that can be organized and run in a number of ways and matched (letter to Council and proposal attached).

Tracie Hanynes: Unique opportunity for Oberlin. Wants a better process for more participation that is more inclusive. Wants something to happen. Wants to see weatherization not words.

Brent Smith: What has been done? Who has done it? Get a plan, decide what needs to be done for house energy efficiency, what it will cost, and raise the money (proposal attached).

Jackie Willis: Speaks for renters who pay for their utilities. How can this benefit renters. Rentals need weatherization and energy efficiency up grades. Renters are in places that need improvements, often badly.

Leo Braido: Has done a number of energy efficiency projects at the IGA. Can see the perspective in lowering electricity rates as well as the importance of energy efficiency projects.

David Sonner: Everybody should benefit from REC dollars including renters. All buildings should be eligible for REC dollars so as to be improved to lower energy use. We should and can be inclusive.

Ray English: Can City Council set up a community task force that is broadly inclusive of all stake holders? Task force might be charged to arrive at consensus.

Laurel Price Jones: Just learning about these issues. One thing that struck me while I was sitting here: perhaps an unintended consequence of not reducing rates with REC dollars might lead to a lack of trust in utility/city in getting what we paid for.

Sid Comings (after work session): Create program to provide all residents with as many LED bulbs as they need.

Councils' concluding remarks made by Sharon Soucy: I want to thank everyone for being here tonight. Our plan is not to rush this decision-making process as indicated by the work session we continued to have tonight. We want to thank everyone who participated tonight and took the time to submit a suggestion. It is suggestions Council seeks. As a Council we would like to encourage all in the community to submit proposals, because that helps Council to understand much we might want to invest in long-term projects. Whether we can arrive a consensus is not clear, but that is our objective.

Heather Adelman setup a google doc for Oberlin residents to submit suggestions to City Council for how REC dollars might be used. Responses listed in order posted.

1. It seems like one fair way to spend this money would be to cut down on energy usage from the city, since we all pay for that. One suggestion---is there a way to see on my bill exactly how much of what I'm paying each month goes towards supporting city buildings, street lamps, etc... I know there is a rate listed, but I'm talking about a dollar amount. I think if I and everyone else saw these numbers, it would help me make a decision about how I want to REC money spent.

2. A 2.0 mega Watt Oberlin solar garden initially financed by REC dollars and from which residents, institutions, and businesses could buy the output from 1 to many solar panels. Each month this kWh output will be subtracted from the owner's kWh use on the owner's City electric bill. Estimated cost for a 2.0 megawatt solar garden is about \$4,500,000 excluding land. This cost will drop by about \$2,250 with the purchase of output from each kilowatt of panels by a resident, business, or institution. The revenue from selling panel output can be returned to the fund from which the solar garden was financed to fund other investments that benefit Oberlin residents

3. Bury electrical wires strung throughout much of the city. They are a safety hazard in snow and ice storms, and the mutilation of the trees along the streets to accommodate the wires is tragic. The newer developments around our town already have underground wires, and such a move would beautify the entire town as well as contribute to our safety and allow trees to flourish.

4. Create low or no interest loans for sustainability initiatives from a revolving loan fund. Establish a foundation or other mechanism for energy and resource conservation in houses and buildings and for shifting to renewable energy sources.

5. Replace the city's cars with electric cars that run on renewable electricity and save gas and money.

6. Create a fund for individuals or groups (schools) to either borrow or use to do energy efficiency projects - a couple of examples - create a revolving loan fund at no or super low interest rate for a home owner to do energy efficiency upgrades ie insulation, etc; another is to do energy efficiency funding for the Oberlin schools particularly if a new building bond is passed to fund things like a geothermal heating system, PV array, etc. including the funding of a new indoor rec space (field house).

7. Ideas put forth are great. But my thought is that if we don't let a large number of Oberlin citizens have a say in this decision, there will be some griping about it and animosity toward City Council. WE may need more time and discussion than a council meeting allows.

8. I would like to see the REC dollars invested for expanded future benefit. I have read the 4 options put forth by B. Burgess, S. Hayes, G. Mathews, C. McDaniel, D. Orr and D. Sonner and I believe that the 4th option (a combination of investment plus immediate utility-related use) is the best option for Oberlin. I also like their idea of hiring a Sustainability Coordinator who could oversee the programs so as not to burden any

current particular agencies. Please DO NOT distribute the REC dollars with no future investment. A few dollars a month can be nice for everyone, but we would be wasting an amazing opportunity to do a larger good for our community. Being able to weatherize homes would make more of a long-term benefit with sustainable energy savings for families and households in need.

9. Until we know WHO is going to be administering the "REC Reinvestment Fund" and HOW this entity is going to be held accountable for the way the funds are distributed and invested, then it is very difficult to decide if this is indeed the right way to go. "Trust us" is not a good answer. The council members who think this is a good idea need to come up with a very specific, very transparent process describing who exactly would comprise such a reinvestment committee and how they would go about selecting their projects.

10. I think the City should use the funds to replace all of the street lamps with LED bulbs. I know some have been completed but all should be done. I think the PUC made a recommendation to do all bulbs as soon as possible with the help of an outside firm since City staff was limited. The sooner this is done the better. We all save money when the City saves money.

11. Identify strategies from the climate action plan that will be difficult to fund any other way.

12. The majority of these funds should be used for projects with long-term gain, not given to ratepayers for a short time, artificially lowering their bills. I think the funds should be used to weatherize and insulate as many buildings as possible in town (city buildings, homes, churches, businesses, industrial park, etc). This is the best use of these dollars because weatherization and insulation can permanently lower utility bills, not just lower bills for a little bit for a few years. The funds should be used to weatherize and insulate City buildings first because when City overhead costs are lowered, all ratepayers and taxpayers benefit. I have heard the City say that they don't have the staff to oversee a program like this. That is simply not a good reason not to use this money wisely. If necessary, use a small portion of the funds to create a new position within the City to administer the program or form a board/commission to do it. It seems like POWER and Columbia Gas can also help administer a project like this in collaboration with the City.

13. Install 10 KW solar array's on one or more of the school buildings. Based on 4.5 hours per day average sunlight for northern Ohio, these array's could each generate approximately 16,500 KWH's per year, saving the schools approximately \$2,000 per year on their electric costs.

14. Provide \$25,000 to each of the community's church's to implement energy efficiency upgrades. These upgrades could include adding insulation, replacing windows, and lighting upgrades.

15. This document is specious because it begins from the assumption that the \$ ought to be retained by OMLPS/City of Oberlin. However, I support the Utility Director's position that the bulk of the money be returned to ratepayers, with a maximum of 15% retained in the Sustainable Reserve Fund. I would support a "check-off" system whereby rate payers could choose whether to receive a rate reduction/refund or return it voluntarily to the Sustainable Reserve Fund. Supporting this proposal does not make me a Climate Change

denier or anti-green, despite what Carl McDaniel and David Sonner would have people believe. It makes me, and City Council members who vote to support the Utility Director, a responsible fiduciary of a municipally owned utility. The Sustainable Reserve Fund would still have plenty of money available for projects that support citywide electricity reduction through replacement of infrastructure. If Council votes to retain the REC\$, then I believe it should be preserved as an endowment, not, as some people suggest, for just \*any\* worthwhile project, but only for greener energy-related purposes. Drawing off the endowment at a rate of 5% per year would provide more than \$100,000 \*per year\* of benefit, in perpetuity. One needs to remember that rate-payers and residents are not one and the same, and we have many utility customers who are not residents or even voters. OMPLS should not be overcharging its customers.

16. Assuming Council elects not to return all of the REC money to the rate-payers, I would like to see Council appoint a working group to propose to Council one or a few specific mechanisms for spending some or all of the REC dollars on energy related projects in Oberlin. The group should consist of individuals with past experience in the investment and expenditure of funds in the \$4M+ range. Ideal candidates for this group should be current Administrators and Board members of local non-profit institutions and foundations, e.g. the Community Foundation of Lorain County, the United Way of Lorain County, the Nord Foundation, Oberlin College, Kendal at Oberlin and NASCORP. Ideally the council chairperson and the City Manager or their representatives will serve as ex officio members. Primary qualifications are experience and wisdom necessary to create a structure in which REC dollars will be invested and dispersed. No expertise on energy and public utility issues is required; the primary goal of the group is to invent a transparent and efficient mechanism for others to manage and spend the REC dollars. I assume the City of Oberlin will provide administrative and budgetary support for the working group.

To evaluate the feasibility of my proposal I would consult widely with community leaders and key members of the associations named above, especially Bill Harper at the United Way, Brian Frederick at the Community Foundation, Mike Frandsen at Oberlin College and John Mullaney at the Nord Foundation.

17. Returning the funds to the ratepayers seems short sighted to me. We have a unique opportunity to use these funds to implement technologies that would improve energy efficiency throughout the community and ultimately help Oberlin achieve the climate goals it set several years ago.

If the problem we're facing is a lack of concrete ideas for how to reinvest the funds, why not use a small portion to pay for a consultant who can develop the ideas for us! Again, it seems foolish and shortsighted to make a decision about what to do with the credits without having explored all of our options.

18. Hire a "Director of The Future" who's direction would be to create a better tomorrow for all Oberlin residents. This person's responsibilities would be to research feasibility of suggested REC reinvestment ideas from the public and investigate similar communities who have had success with reinvestment of public funds. They would also, as an on going position, be charged with formulating new programs and developing funds to continue future programs or projects.

19. I feel that this large, unanticipated, sum of money is a windfall we must use in the most effective and beneficial way for the most people in Oberlin. That means doing several different kinds of things with it and dividing it I'm sure. For me personally, doing all we can to decrease our carbon footprint and increase the chance of saving the planet for my grandchildren is the most important. So funding our Climate Action Plan would be one piece.

However, for some Oberlinians living in drafty and leaky homes, that may be an abstract concept they're too cold and uncomfortable at the moment to care about. Getting back \$7.00/month (\$84.00/year) credit on their electric bill won't be able to remedy that situation, but access to interest free (they've already paid the interest in effect) loans, and encouragement and information about how improving their homes and/or energy efficiency of their appliances can make them more comfortable, and lower their utility bills, and save the planet—that's a win, win, win situation! Obviously this would entail working out what it would cost, who would administer the process and much much more, but getting everyone at all levels engaged and feeling some real-time benefits from the use of this large chunk of capital is imperative.

20. Develop a community based home insurance program in which home owners in Oberlin could be members of a community owned insurance co-op. A portion of the REC dollars, along with possible matching grants, would be the seed money to start the program. Positive revenue would be reinvested in the co-op and with the people who purchase insurance from the program for home improvements and weatherization.

21. Anything that would yield a positive return on investment. This money was generated by making good financial decisions. Please continue to think with a creative mind for a better future for Oberlin and invest this money wisely for the benefit of everyone.

22. My name is Mindy Brueggemann, and I am an Oberlin resident. I would like to see the REC dollars used for reinvestment purposes, and would like to second Katie Hayes' ideas, as outlined below (copied and pasted from her recent email to City Council).

Thank you for considering reinvestment of the REC dollars.

23. (attached to item 22) My name is Katie Hayes, and I am a community member in Oberlin. Unfortunately, I will be out of town during your upcoming work session on Monday, March 21st, where you will be discussing the spending of the funds generated by trading our renewable energy credits. This, "REC Money," as I understand it totals nearly 2 million dollars to date. The purpose of this email is to share my thoughts with you on how this money could be spent, since I can't come to the work session. I hope others who are out of town for either Oberlin College or the Oberlin City School's Spring break will do the same.

I believe these funds should be invested in ways that will permanently lower bills for Oberlin Residents and Businesses.

For Residents: \$500,000 per year should be invested in a program that will work with the 300 homes in town who are in danger of having their power shut off each month. Along with their orange stickers, these homes should be offered an opportunity from the city to have their bills paid in full as an incentive to participate in a new weatherization program. We know that in our region, weatherization programs save families (conservatively) about \$200.00 a year. This would benefit the utility because it would

lower the amount of shut offs, notices, and late fees exercised on a monthly cycle. It would benefit residents by offering them potential savings of over \$17 per month (more than twice the \$7 offered by a rebate program, and unlike the rebate program, these energy savings would be permanent, lasting after the REC money stops.) As an added benefit, the city already has partnerships with organizations like POWER, and Oberlin Community Services, who could help with the administration of such a program. Here is a breakdown of program costs:

- Expanded Funding for the Caring Fund (bill-pay incentive for 300 customers, at roughly \$120 each) \$36,000
- Cost of weatherizing homes after utilizing Columbia Gas programs (300 households, with an average of \$1,200 in weatherization costs per household.) \$360,000
- Expanded administrative costs- (Additional staffing and a marketing budget.) \$85,000
- Total Cost \$481,000

For Businesses: \$500,000 per year of the funds should go into a sustainable reserve fund specifically marked for Oberlin Businesses. A liaison or other position should be created to reach out to our local businesses and help them identify areas where they can save money on their energy usage, help connect them with local contractors to do the work, walk them through the application process, and pay for these improvements, resulting in significant monthly savings for these business, which will translate into job creation and a healthier local economy.

Total Cost: \$500,000

**Note:** there is currently an argument that it doesn't make sense to add more money to the sustainable reserve fund because it is under-utilized as it is. It is important to point out that, thus far, it has been extremely hard to access sustainable reserve funding, and the application is not even available on city websites. This is why the creation of an outreach position is so vital to truly helping Oberlin businesses access and invest these dollars.

24. It is my strong recommendation that these funds are used for permanent and long term improvements rather than minimal, short term, and temporary rate reductions.

Where I grew up, the city had a Sustainability Commission. The Commission had the following charter: "This seven-member commission acts in an advisory capacity to the City Council to provide expertise on major policy areas related to the environmental sustainability goals of the Climate Action Plan (CAP) and General Plan. Specific duties include:

- Advise Council on policy issues addressing sustainability goals.
- Advise Council on how to strategically accelerate Sunnyvale's progress towards sustainability and recommend priorities, in order to promote continued regional leadership in sustainability.
- Periodically review policies governing specific practices, such as greenhouse gas (GHG) emissions reduction, water conservation, renewable energy, energy efficiency, waste reduction, and urban forestry. Illustrative examples include creation of infrastructure for low emission vehicles, habitat restoration and conservation, biodiversity preservation, and reduction of toxics in the waste stream.

- Advise Council on ways to drive community awareness, education, and participation in best practices.
- Review and make recommendations to Council on Federal, State and regional policies related to sustainability which impact Council's goals and policies"

I think the City of Oberlin should form a similar group that reports to City Council. In conjunction with the creation of the Sustainability Commission, the City of Oberlin should create a paid staff position, the Director of Sustainability. This position could be modeled after the City of Cleveland's. The position would be responsible for implementing the Climate Action Plan (with the Commission) and creating a system for REC distribution and ensuring the funds went to the projects with the best and highest rate of return for all ratepayers.

## Proposal to Use REC and Resident Dollars for Solar Garden

Carl McDaniel

Project Cost: Estimated cost for a 2.0 megawatt solar garden is about \$4,500,000 excluding land. This cost will drop by about \$2,250 with the purchase of output from each kilowatt of panels by a resident, business, or institution.

### Introduction

The City's Climate Action Plan calls for the City to reduce its heat trapping gas emissions by 50% from their 2012 level by 2015, 75% by 2030, and more than 100% by 2050, thereby achieving climate positive. Primarily by aggressively shifting its electricity generating fuel from coal to renewable (wind, hydro, solar) and carbon neutral fuels (landfill gas) as well as via conservation and efficiency measures in electricity use, the City has achieved its goal of a 50% reduction by the end of 2015. Further reductions to attain zero emissions will be more challenging and require aggressive measures across all activities in Oberlin that result in reduced emissions of carbon dioxide and other heat trapping gases as well as increased sequestration of carbon dioxide.

To date photovoltaic electricity (solar) has played a minor role in Oberlin's emissions reduction. Solar energy accounts for about 3% of Oberlin's electricity generation or about 2.5 megawatts. It is unlikely with current technologies for electricity storage and with Oberlin's contracted capacity that this percentage can increase more than a few percent in the next 5 years. However, current opportunities in Oberlin and the significantly lower cost for solar make it desirable to increase solar contribution by about 2.0 megawatts over the next several years.

### Why More Solar Now?

Oberlin Peoples Energy Coalition (OPEC) in partnership with Ohio Sun have formed the Lorain County Solar Co-op (LCS Co-op), a community solar project in which Oberlin residents with an appropriate solar aperture can participate and have a PV system installed on their roof or land. It is estimated that the LCS Co-op will have between 40 and 80 members who in total will install between 200 and 300 kW with perhaps half in Oberlin. This program is only available to persons or small businesses that have suitable solar sites.

Residents, businesses, and institutions that do not have a suitable solar site have also expressed a desire to have their own solar electricity. A solar farm established by the City would provide this opportunity to all Oberlin City residents, businesses, and institutions as well as increase the City's renewable electricity by a small amount. An OMLPS solar garden would allow OMLPS customers to purchase the output from one or many panels and have the kWh produced credited on their utility bill. A solar garden of 2.0 megawatts would likely be adequate to meet residential, business, and institutional demand for at least the next several years and not add too much additional capacity to OMLPS's portfolio.

The cost per watt for Lorain County Solar Co-op members is projected to be about \$3.25 with that price lowered 30% by the federal tax credit claimed by each PV system owner. The total estimated cost per watt would be \$2.22.

The cost per watt for the Solar Farm is estimated to be about a dollar lower than that for an individual system or \$2.25, or a cost of \$2,250,000 per megawatt. If the City could take advantage of the federal tax credit as Oberlin College did, the cost per watt would decrease to \$1.57 or \$1,570,000 per megawatt.

The price to the City for the array will be lowered by the purchase of the output of panels by residents, businesses, and institutions. In Oberlin each kW of PV annually produces about 1,000 kWh. If a resident is charged the installation cost for the output of a kW of panels, the cost per kW would be about \$2,250. If the City attained the federal tax credit, the cost per kW would be about \$1,570.

It should also be noted that the cost to the City will also be lowered, because the electricity is fed directly onto OMLPS grid therefore saving on transmission costs.

By selling the output from the solar garden, the City gives residents, businesses, and institutions an opportunity not only to produce some of their electricity, but also assist the community in becoming climate positive.

Assuming the price of electricity in Oberlin will be \$0.12 per kWh, each kW of panels will reduce annually the owner's electric bill by about \$112. However, this savings does not have to be earned thereby saving an additional \$28 ( $\$112 \times .25$  [25% tax rate for federal, state, and city income taxes and school tax] = \$28) or a total savings of \$140. At a cost of \$2,250 for the output of a kW of panels, the payback would take about 16 years, if electricity cost remains the same. If the cost is \$1,750 for the output of a kW of panels, the payback time is about 13 years. After the initial cost is paid back, the resident's electricity is free except for maintenance of PV system that is minimal.

# **Leveraging Columbia Gas Programs for Business & Nonprofit Energy Efficiency: Proposal to use REC Dollars to Increase Value and Energy Savings for Large Non-Residential Accounts**

**Sean Hayes**

## **Introduction:**

Columbia Gas of Ohio currently offers a custom energy efficiency program, known as “Innovative Energy Solutions” (IES), to its large commercial and industrial ratepayers (defined: greater than 3,000 CCF/year on a non-residential rate). The program pays 50% of the cost of an ASHRAE Level 2 or 3 audit (capped at \$5000/customer) along with 50% of the installed cost of Energy Conservation Measures (ECMs) recommended by that audit with a savings to investment ratio greater than 1, up to a maximum of \$100,000 per meter. IES is non-prescriptive and allows a wide range of gas-saving improvements to qualify. While labeled “commercial & industrial,” **non-profit, for-profit, government, schools, and churches are all eligible for the program.** The program’s outreach manager, Samantha Schneider, has indicated a strong interest in seeing more Oberlin organizations take advantage of the program.

## **The Proposal:**

REC dollars would pay 50% of the remaining cost of an ASHRAE Level 2 or 3 audit, after Columbia Gas rebate, up to a maximum rebate of \$2,500. The energy audit would deliver an itemized list of ECMs, the estimated cost per improvement, Columbia Gas Incentive (instant rebate) per improvement, and estimated annual savings per improvement, along with simple payback calculations and savings to investment ratios for each improvement.

At the completion of qualified ECMs, REC dollars would be available in the form of an instant rebate equal to 50% of the remaining cost of ECMs, after Columbia Gas rebate, up to a maximum rebate of \$50,000 per meter. These dollars would operate in a fashion similar to Oberlin’s current “Super Rebate Program” for energy efficient appliances, but coupled with Columbia Gas’s IES program instead of EfficiencySmart.

**Program Costs:**

Item	Cost/Unit	Units	Subtotal
ASHRAE Level 2/3 Audit	\$2500/audit (max)	50 qualifying businesses	\$125,000
50% of ECMs with SIR>1	\$50,000/meter (max)	50 meters	\$2,500,000
Additional Administrative Cost (Annual)	\$25/hour + 35% benefits	1 FTE	\$70,200
<b>Total (1-Year Program)</b>			<b>\$2,695,200</b>
<b>Total (5-Year Program)</b>			<b>\$2,976,000</b>

**Program Savings:**

Annual natural gas savings (CCF, max): 850,000 (0.343 CCF/dollar x \$2.5M)  
Investment Cost (5-year program, max): \$2,976,000  
Estimated Useful Life (years): 20

Net Present Value Projected Savings, max<sup>1</sup>: \$8,367,792  
Investment Cost (high, max): \$2,976,000  
Savings to Investment Ratio: 2.81 (not including value of Columbia Gas investment or increased infrastructure value)  
Annual Carbon Emissions Reduction: 4,515 MT<sup>2</sup> or about 8.5% of Oberlin's current GHG emissions

Additionally, a maximum of \$5,250,000 of Columbia Gas investment would be delivered to Oberlin businesses. If included, these numbers bring the NPV to a projected \$13,617,792. Furthermore, many gas-saving ECMs will yield additional electricity savings not detailed in these projections (presumably all natural gas account holders in Oberlin are also served by OMLPS). These savings could improve the economic value of investing REC dollars beyond lowering electricity and gas usage costs by reducing summer peak loads, which benefits the utility and all ratepayers.

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<sup>1</sup> Net Present Value Assumptions:  
2.5% – annual gas cost escalation rate  
5.65% – discount rate  
\$0.573 – year 1 natural gas rate  
\$200/year – Current Columbia Gas Weatherization Program Avg. Annual Savings

<sup>2</sup> 53.12 kg/thousand cubic feet natural gas

**Advantages:**

Each REC dollar spent on approved ECMs in this program brings in two dollars from Columbia Gas and one from the organization receiving the savings. This immediately quadruples the value of a REC dollar to the community. Combined, these organizations would see \$500,000/year in permanent avoided energy costs at current rates.

Natural gas accounts for 52% of Oberlin's current greenhouse gas emissions and 60% of Oberlin's natural gas consumption is attributable to commercial and industrial accounts. This program is the most cost-effective way to reduce large account gas consumption. The more efficient these processes are, the easier future fuel-switching opportunities will be to implement, as detailed in the City's 2013 Climate Action Plan.

This program leverages a preexisting program's administration and oversight, minimizing staffing needs. Columbia Gas already vets auditors and delivers energy and financial modeling. Similarly, a grant program requires less operational and administrative costs than does a loan program.

**Drawbacks:**

This proposed program prioritizes and delivers large account savings over savings to other rate classes and is only available to natural gas accounts that meet the criteria.

The grant nature of this program only allows dollars to be spent once.

**Additional Considerations:**

This program is cost-effective even at the current low price of natural gas. Should the price of gas increase in the future, annual savings would increase accordingly. Energy efficiency shields organizations from price volatility of finite resources like natural gas and increase the feasibility of fuel switching to renewable electricity as proposed in Oberlin's 2013 Climate Action Plan.

The proposed instant rebate program could also be structured as a low- or no-interest loan program if on-bill or PACE financing were utilized. In that case, the majority of REC dollars would be available for reuse on future projects. This would add additional administrative costs and complexity.

A marketing and advertising budget may be necessary and is not included.

Program costs (and savings) are estimates and based on max-dollar projects at all qualifying accounts. It is probable that costs and savings would be lower, but the return on investment per dollar spent would be similar.

# **Lowering Oberlin Residents' Energy Bills and Improving Homes: Proposal to use REC Dollars for Residential Weatherization**

**Sean Hayes**

## **Introduction:**

Each year, Oberlin households conservatively spend \$3.5 million for heat and electricity in their homes. On average, that is over \$1,300 for each household with energy costs projected to rise. Low-income households pay a higher percentage of their income toward energy and are often less able to make energy efficiency improvements to their homes, either due to renting, competing bills, or low or no access to traditional sources of financing. This situation is known as “energy poverty.”

Currently, Columbia Gas of Ohio offers residential weatherization programs for Oberlin households that heat with natural gas. Approximately 85% of Oberlin households heat with gas. These limited-time programs offer generous instant rebates for home weatherization (air sealing and insulation) that will permanently reduce energy costs for participating Oberlin households. Columbia Gas has reported that the average annual energy savings for its programs is approximately \$200/year for each home at current natural gas prices, equaling a 15% savings in annual energy costs based on the Oberlin average. In Oberlin, these energy efficiency improvements cost (on average) \$2350 per home. Depending on the recommended improvements, the Columbia Gas program pays about half of that cost, leaving between \$900-\$1,300 in improvement costs to the homeowner. Local nonprofit POWER (Providing Oberlin With Efficiency Responsibly) has had increasing success each year in helping local residents access these and other efficiency programs but barriers to entry still exist, especially for households in energy poverty. Per the City's 2013 Climate Action Plan (p.21), POWER estimated approximately 1,000 Oberlin homes required energy efficiency upgrades. To date, about 100 homes have made improvements, leaving an estimated 900 homes in need of energy efficiency.

## **The Proposal:**

REC dollars would pay the cost of residential home energy audits in Oberlin. Those home energy audits cost \$50 and are a \$500 value/home. The energy audit delivers an itemized list of improvements, known as “Energy Conservation Measures” (ECM), the estimated cost per improvement, Columbia Gas incentive (instant rebate) per improvement, and estimated annual savings per improvement, along with simple payback calculations and savings to investment ratios for each improvement.

REC dollars would then be available in the form of an instant rebate at the completion of qualified ECMs. These dollars would operate in a fashion similar to Oberlin's current “Super Rebate Program” for energy efficient appliances, but coupled with Columbia Gas's “Home Performance Solutions” program instead of EfficiencySmart.

100% of the remaining ECM costs (after Columbia Gas instant rebates) would be paid with REC dollars. That cost per home is estimated at approximately \$1,200.

**Program Costs:**

Item	Cost/Unit	Units	Subtotal
Home Energy Audit	\$50/audit	1500 homes	\$75,000
(Balance) Home Weatherization	\$1,200/home	900 homes	\$1,080,000
Additional Administrative Cost (Annual)	\$25/hour + 35% benefits	2 FTE	\$140,400
<b>Total (1-Year Program)</b>			<b>\$1,295,400</b>
<b>Total (5-Year Program)</b>			<b>\$1,857,000</b>

**Program Savings:**

Annual natural gas savings (CCF): 297,000 (330/home x 900 homes)  
 Investment Cost (5-year program): \$1,857,000  
 Estimated Useful Life (years): 25

Net Present Value Projected Savings<sup>3</sup>: \$3,572,993  
 Investment Cost (high): \$1,857,000  
 Savings to Investment Ratio: 1.92 (not including Columbia Gas investment or increased home value)  
 Annual Carbon Emissions Reduction: 1,578 MT<sup>4</sup> or about 3% of Oberlin’s current GHG emissions

Additionally, approximately \$1,035,000 of Columbia Gas investment and \$675,000 of home energy audit value would be delivered to Oberlin residents. If included, these numbers bring the NPV to a projected \$5,283,000. Furthermore, weatherization should be expected to yield additional electricity savings not necessarily detailed in Columbia Gas’s programs (presumably all natural gas account holders in Oberlin are also served by OMLPS). Electricity savings from reduced HVAC fan, pump, and air conditioning run time is expected but is not detailed in this projection. Beyond lower electricity usage

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<sup>3</sup> Net Present Value Assumptions:  
 2.5% – annual gas cost escalation rate  
 5.65% – discount rate  
 \$0.573 – year 1 natural gas rate  
 \$200/year – Current Columbia Gas Weatherization Program Avg. Annual Savings

<sup>4</sup> 53.12 kg/thousand cubic feet natural gas

costs, these electricity reductions would reduce summer peak loads, benefiting the utility and all ratepayers.

### **Advantages:**

Each REC dollar spent on approved weatherization brings in a dollar from Columbia Gas, doubling its value. The average annual residential energy savings for households participating in Columbia Gas programs is \$200. Those annual savings from energy efficiency are **permanent and will increase as energy costs rise**. This program creates job opportunities, improves home values, and delivers increased savings and comfort for Oberlin residents most in need by breaking the cycle of energy poverty.

Natural gas accounts for 52% of Oberlin's current greenhouse gas emissions and 40% of Oberlin's natural gas consumption is attributable to residential homes. This program is the most cost-effective way to reduce residential gas consumption. It also prepares homes for future fuel-switching opportunities (e.g. from natural gas heating to heat pumps) as is detailed in the City's 2013 Climate Action Plan.

This program leverages a preexisting program's administration and oversight, minimizing staffing needs. Columbia Gas already vets auditors and contractors along with vetting energy and financial modeling.

A grant program requires lower operational and administrative costs than a loan program.

### **Drawbacks:**

This proposed program prioritizes and delivers residential savings over savings to other rate classes.

This proposed program prioritizes and delivers social benefits over potentially higher carbon reductions (though it delivers both at a cost savings).

A grant program only allows dollars to be spent once.

### **Additional Considerations:**

Columbia Gas programs are available only to customers who heat with natural gas. All-electric households will not be able to take advantage of these rebates. The full cost of weatherization for all-electric homes would need to be borne by this program. This may be 15% of homes in need of weatherization, which would increase program costs. It should be noted, however, that Columbia Gas offers income-qualified programs at no cost to ratepayers below 150% of the federal poverty guidelines. Given Oberlin's 19.8% poverty level (2010 Census), it is a reasonable assumption that the number of free weatherization programs should offset the number of all-electric homes.

Home weatherization in some homes may not be possible until a preexisting condition is resolved (e.g. knob & tube wiring, carbon monoxide leak, etc). Contingency plans should be developed to deal with these obstacles.

This program is cost-effective even at the current low price of natural gas. Should the price of gas increase in the future, annual savings would increase accordingly. Energy efficiency and home weatherization shield residents from price volatility of finite resources like natural gas and increase the feasibility of fuel switching to renewable electricity for home heating as proposed in Oberlin's 2013 Climate Action Plan.

For the sake of simplicity and to maximize the investment from Columbia Gas programs, this program pays for 100% of the balance of home weatherization after Columbia Gas incentives. A sliding scale could be developed. Such a scale would likely add to administrative costs while decreasing home weatherization rebates.

The proposed instant rebate program could also be structured as a low- or no-interest loan program if on-bill or PACE financing were utilized. In that case, the majority of REC dollars would be available for reuse on future projects. This would add additional administrative costs and complexity.

A marketing and advertising budget may be necessary and is not included.

## David Orr email to Cityon Community Foundation Proposal (April 26, 2016)

To members of the City Council: I apologize for the mass email, but I've been told that there are "no viable" proposals presently before you. I've attached a brief document previously sent that proposes REC monies, which are public funds, be used to start an Oberlin Community Foundation dedicated to improving housing and lowering energy costs for Oberlin residents that need it most as well as for local businesses. In this proposal Council would set the guidelines for grants and loans made from the Foundation endowment. I propose that the core purpose be energy related: (1) to improve efficiency and deploy renewable energy technologies; (2) serve the needs of those who need help the most by lowering energy costs and improving home comfort; (3) support efforts to improve energy efficiency for local businesses and the Oberlin school system; (4) support employment of local people in energy-related employment.

Were such a foundation to be created at a \$4-5 million level, I would agree to join with others to raise matching funds toward a \$10m + fund that would permanently lower energy costs, improve property values, and bolster the local economy.

The arguments I've heard why this is not possible are that: (a) it isn't politically feasible now; (b) that it would be contested in court by one or more of the large energy users claiming that it is their money; and (c) that it is, for various reasons, not legal. My response is to say that if you as Council decide to do this or something similar, it is feasible. A court challenge is not likely if the proceeds from the foundation were dispersed fairly throughout the entire community. And this proposal is entirely within the bounds of the law which requires that the funds be used for public purposes. This goes further to use the funds to improve energy efficiency and deploy solar systems.

This is the only chance we will have for a long time to come to do something substantial to reduce energy costs, not temporarily, but permanently while creating jobs and other benefits. It would be a shame to miss this opportunity and discover a few years from now that we blew it for no good reasons and left people who need help on their own.

Sincerely, David Orr

## **Proposal to establish an Oberlin Community Foundation**

David Orr

The City of Oberlin presently holds \$2,000,000 from the sale of RECs. Over the next few years the revenue could grow by another \$2-4 million. As a result the City Council must decide how to allocate roughly \$4-6 million of public funds.

I propose that these funds be used to permanently:

1. Help those most in need,
2. Improve comfort of homes and increase property values,
3. Lower homeowners net energy costs,
4. Create local employment,
5. Improve energy efficiency and reduce community carbon emissions.

To achieve these, I propose that REC monies be placed in an Oberlin Community Foundation directed to allocate funds to improve energy efficiency, comfort, and property values of those most in need; deploying renewable energy to homes and neighborhoods; and support local job creation in the energy sector. A foundation created and directed by the City Council could be administered by any other local community foundation or organization.

The advantages of a community foundation include:

Flexibility—the Council could decide to make the endowment a permanent fund or spend it down.

Foundations can make grants or lend money.

They can grow by seeking matching funds to grow an initial endowment.

They can also receive bequests from Oberlin residents.

Properly managed and wisely used, Community Foundation funds could be a permanent asset to improve equity and prosperity in Oberlin. Energy savings from projects would be permanent annual savings, not a temporary patch on a larger problem.

## Proposal to Raise Funds for House Energy Efficiency

Brent Smith

March 18, 2016

To Members of City Council, Utility Department and the Administration;

I am presenting my observations concerning the REC monies and potential energy efficiency upgrades to homes in the community. My assessment examines the needs and possible expenditures needed to bring existing homes nearer to Building Performance Institute standards. Costs and available programs are based on discussions with people working in local efficiency programs and personally evaluating thousands of homes in the last several years for programs run for Columbia Gas. All homes were given recommendations based on the cost effectiveness of the improvements. My views are personal, as a citizen of Oberlin and I am not representing the companies that I am employed by.

The essential question is to determine the scope of the needed funding to examine a large number of homes for possible energy efficient upgrades and possible safety related issues. The next question is to examine the means of paying for the improvements, taking into account successful existing programs that are available to citizens.

There are two programs available to the low income homeowner (HWAP), a weatherization program and The Warm Choice program. These tend to be slow to provide results and have limitations and are not being examined in this exercise. Including them in any potential citywide program discussions is recommended to fill a specific need and to take advantage of existing dollars.

There are two programs operated by Columbia Gas and run by CLEARResult that are operating in Oberlin. There is the Assisted audit and the Standard audit, which are comprehensive auditing processes available to the citizens. They operate exactly the same except for the initial audit fee and the out of pocket for the homeowner to have the recommended air sealing and insulation work performed. These are based on income levels and are available to all. The Assisted requires \$20 for the audit and the standard audit fee is \$50. An assisted homeowner would pay the first \$300 dollars of the work to be performed and Columbia Gas picks up the remainder. The standard audit homeowner is offered substantial rebates on the work to be done based on the scope of the work. A 30% or greater discount is the general rule with some discounts much higher.

The following section is to illustrate the potential costs of the programs involved on a larger scale. I have picked 1000 homes as a target to audit and make improvements if necessary. The costs presented are based on pricing thousands of audits and discussions with Greg Jones the community outreach person of POWER. The mix of Homes is 700 assisted and 300 standard audits. These figures assume no cost to the city as this is the present setup. Screening and signing people up for audits are already being done by Clearesult with help from present staff. Homeowners with skin in the game are likely to proceed. The scenario below assumes \$ 2000 in work to be done as a historical average. This scenario does not cover all situations, but is intended to show that massive taxpayer

dollars are not needed to achieve truly remarkable savings in usage, cost to homeowners, increased safety and comfort. This work could be done in a very short time, perhaps less than 5 years.

<u>Assisted Homes</u>	Homeowners Cost	Col Gas Cost
Audit cost 700 homes @ \$ 20	\$14,000	
Energy upgrade Cost 700@ \$ 300	\$210,000	
Total Assisted Homeowner	\$224,000	
700@ \$1700 average paid by Col Gas		\$1, 190,000
<u>Standard Audits</u>		
Audit cost 300 homes@ \$ 50	\$15,000	
Work Cost 70% homeowner		
Energy upgrade 300 homes@ \$1400	\$420,000	
300 Homes@600 paid by Col Gas		\$180,000
Total \$ Homeowner and Col Gas	\$659,000	\$1, 370,000

To further assist our citizens in need we could always offer financing that is taken off the utility bill, or put on the taxes much like how our sidewalk repair was done.

There are furnace replacement rebates available as well for the homeowner.

In closing it is my position that the Utility Director's proposal for the use of existing REC funds provides plenty of money to remove roadblocks to utilizing the above mentioned programs. It also can fund and leverage other opportunities that become available and are cost effective to take advantage of. The City could achieve the goal of the majority of homes being brought to a very energy efficient level quickly by using present resources. There are most certainly commercial and industrial efficiency programs that need to be investigated that can bring the same bang for the buck for our non-residential sites. The expenditure of additional large portions of potential REC dollars to create new programs is unnecessary and wasteful.

I am available for further explanation of these programs and to offer my assistance with furthering the energy efficiency of our community.

Brent R. Smith

Senior Energy Auditor Clearesult

[brs@oberlin.net](mailto:brs@oberlin.net)

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