

**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**

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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
Total (1-Year Program)			\$2,695,200
Total (5-Year Program)			\$2,976,000

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, max¹: \$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 MT² 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.

¹ 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

² 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.