



OBERLIN MUNICIPAL LIGHT AND POWER SYSTEM ■ 289 SOUTH PROFESSOR STREET ■ OBERLIN, OHIO 44074

Phone (440) 775-7260

Fax (440) 775-1546

Memorandum

TO: Scott Broadwell, City Council President
City Council Members

THROUGH: Eric Norenberg, City Manager

FROM: Steve Dupee, Electric Director

RE: City Council Work Session – October 19th
Renewable Energy Certificate Policy Recommendation

DATE: October 16, 2015

Purpose

The purpose of this memorandum is to present policy recommendations by the PUC and staff regarding the disposition of net proceeds realized from sale and purchase transactions of renewable energy certificates to 3 Degrees, Inc. of San Francisco, CA.

Background

Renewable Energy Certificates or RECs represent the environmental attributes associated with renewable energy production (e.g. emission characteristics, emission credits, emission allowances). RECs create a financial mechanism to encourage the development and construction of renewable generation and are a tradable commodity which can be sold separately from renewable electricity production. Over the last several years, the City has transitioned its power portfolio from fossil fuel sources to renewable/carbon neutral sources requiring the acquisition of RECs negotiated through long-term power supply agreements.

At the request of the PUC and in accordance with the City's Climate Action Plan, staff explored opportunities to create financial value from the City's REC portfolio while maintaining the City's climate goals. In early 2014, staff proposed to leverage the market value of the City's REC portfolio by selling its RECs into mandatory compliance markets and purchasing replacement RECs from voluntary markets. REC values in mandatory compliance markets are generally higher than voluntary markets. In May of 2014, City Council authorized a Renewable Energy Certificate Master Services Agreement with 3 Degrees, Inc., a national REC marketer and broker, and in August of 2014, the first REC sale/purchase transaction was executed. The REC sale transaction involved RECs from four (4) of the City's power supply resources including the Waste Management

Landfill Gas Projects, the Erie County Landfill Gas Project and the Blue Creek Wind Project.

The City used a portion of the net proceeds from the sale of its RECS to purchase replacement RECS through 3 Degrees from the Crossroads Wind Farm in Oklahoma. The remaining net proceeds from the first transaction totaled \$991,195.50. The PUC discussed and considered disposition options for remaining net proceeds earned on the first transaction with 3 Degrees. Staff recommended that net proceeds be utilized to mitigate wholesale power increases and true up the over recovery of wholesale power expenses via a monthly generation charge credit. The basis for staff's recommendation relied on the utility's unbundled electric rate structure, cost recovery policies and ensuring transparency on the true costs of the City's renewable power portfolio. The PUC expressed an interest in using net proceeds for funding municipal utility energy efficiency projects, the Sustainable Reserve Program, additional investment in the Efficiency Smart program and tree planting. In January, the PUC recommended on a 3-2 vote to earmark \$300,000 of the net proceeds to re-lamp as many municipal street light fixtures with LED technology and hold the remaining \$691,195.50 until the PUC considered other energy efficiency projects.

On May 18th, City Council heard a presentation on discussions and recommendations of the Public Utilities Commission and staff regarding net proceed disposition options for Renewable Energy Certificate (REC) transactions. Following discussion and debate, City Council directed staff to develop a comprehensive REC policy for discussion and consideration by the PUC with a goal to present policy recommendations to City Council following the summer recess.

Discussion

Based on comments and feedback from council members during the May 18th meeting, staff commenced work on developing a policy focused on the utility's fundamental responsibility to procure and deliver environmentally-sound electricity at just and reasonable rates while continuing to support the goals of the City's Sustainable Reserve Program and Climate Action Plan. In developing the policy framework, staff considered a number of issues including:

- REC transaction proceeds and what they represent;
- recovery of wholesale power expenses on a dollar for dollar basis;
- municipal and customer energy efficiency initiatives/services; and,
- the City's Sustainable Reserve Program and Climate Action Plan objectives.

In August, staff presented its proposed policy to the PUC. The proposal included two primary policy objectives as well as a preliminary draft restructuring concept for the City's Sustainable Reserve Program.

The first policy objective focused on the primary purpose of the City's REC acquisition activities and its interrelationship with net proceeds from REC transactions with 3 Degrees. Over the last several years, the City has acquired RECS through the execution of long-term power supply contracts for the sole purpose of transitioning its power portfolio from fossil fuels to renewable/carbon neutral sources of electricity to in order to reduce greenhouse gas emissions. The City's electric customers pay a premium for RECs acquired through these power supply agreements

in their monthly retail electric bill. The agreement with 3 Degrees allows the City to monetize the RECS and used a portion of the proceeds purchase lower cost RECS in order for the City maintain its renewable/carbon neutral power portfolio and continue to meet greenhouse gas reduction goals set forth in Climate Action Plan.

The procurement of low cost RECS benefits electric customers by reducing the overall cost of the City's renewable/carbon neutral power portfolio. The first policy objective seeks to ensure the electric customer receives a portion of this benefit through the gradual return of net REC proceeds via a monthly generation credit over a to-be-determined time period. The policy objective ensures customers pay for renewable energy that more closely reflects the City's true cost and continues the long established policy to recover wholesale power costs on a dollar for dollar basis. Staff recommended to the PUC that 85% of net proceeds be used for this purpose. Staff notes that additional review and consultation with the utility's cost of service consultant would be required to develop a prudent and financially-sound structure for implementing a monthly generation credit plan.

The second policy objective focused on creating an additional revenue stream for a proposed restructuring concept for the Sustainable Reserve Program. The Sustainable Reserve Program, established in 2007 by Ordinance 07-39 AC CMS, is currently a "grants-based" program offering funding opportunities for local, utility-related environmentally-friendly initiatives. Any individual, business, or organization located in the utility's service territory is eligible to apply for a SRP grant. To be considered for funding, the initiative must demonstrate a purpose reasonably related to the municipal electric system operation, offer a community-wide benefit and include at least one of the following program goals:

- (1) Energy Efficiency
- (2) Energy Conservation
- (3) Green-House Gas Reductions
- (4) Development of future renewable-generation projects.

Applications for funding are reviewed by the Electric Director, City Manager and Law Director. Final funding approval is subject to City Council's discretion and appropriation of funds. The program has received funding from net proceeds of REC sales to Oberlin College and First Energy. Since 2005, the fund has received a total of \$432,176. Initiatives funded since the inception of the program are shown below.

1. Wind Monitoring Project – OMLPS (John Scofield) * - \$12,747
2. Full Circle Fuels Bio–Diesel Fuel Station - Sam Merritt * - \$10,000
3. POWER Low Income Insulation Program - \$12,750
4. POWER Energy Advocate - \$60,000
5. Small Business Energy Audits - \$3,000
6. Super Appliance Rebate Program - \$16,000
7. Green-house Gas Inventory - \$12,855

Total Funding: \$127,342

*Initiatives funded before formal program establishment and adoption of SRP in 2007.

OMLPS has partnered or been the lead applicant on 6 of the 7 initiatives. The current balance in the Sustainable Reserve Program is \$311,000. Program results over the past decade have revealed both strengths and weaknesses of the existing structure outline below.

Strengths

- Leveraged other financial resources into the community.
- Enhanced existing OMLPS energy efficiency program.
- Produced goodwill and customer satisfaction.
- Supports consumer education and engagement in energy efficiency.

Weaknesses

- No development of renewable energy projects.
- Has not produced significant electricity savings.
- Underutilization of funding resources.
- Has not produced significant or cost effective CO2 emission reductions.

In order to build upon the strengths and limit weaknesses of the existing SRP program, staff has considered a restructuring concept that would seek to transition the SRP from a “grants-based” program to a” utility-sponsored” public benefits program with a goal of offering a menu of customer services via strategic alliances that support the goals of the City’s Climate Action Plan on behalf of the City’s electric customers. An additional revenue stream would help financially support funding to enhance the utility’s energy efficiency program and other greenhouse gas reduction initiatives reasonably related to purpose of the municipal electric system. Staff recommended that 15% of REC revenues be used for this purpose. The Sustainable Reserve Program would continue to be subject to City Council annual budget appropriations.

Staff’s REC policy framework was presented and discussed with the PUC over the course of two meetings in August and September. Additional information was requested and presented to the PUC. No formal action was taken on staff’s proposal.

PUC REC Policy Recommendation

PUC member, Carl McDaniel, prepared and presented a policy recommendation for the commission’s consideration to deposit 100% of the net proceeds from REC transactions into the City’s Sustainable Reserve Program. The recommendation was slightly revised and presented to the PUC at their September meeting and subsequently approved on a 3-2 vote. The revised recommendation supports the deposit of perhaps 85% of net proceeds into the City’s Sustainable Reserve Program with remaining funds to be spent for the betterment of the Oberlin community. The PUC further recommended that guidelines of the Sustainable Reserve Program be modified to alter the review and approval process for program funding requests based upon whether the request is under \$50,000 or equal to or greater than 50,000. For requests under \$50,000, the Electric Director or his designee would review applications, transmit approval or disapproval and execute funding if approved. If the request was equal to or greater than \$50,000, the Electric Director would follow the current prescribed method for review and approval in the Sustainable Reserve Program guidelines.

Commission member McDaniel's REC policy recommendation suggests prioritization of Sustainable Reserve Program funds as summarized below.

Municipal Facility Energy Efficiency

First, funds should be prioritized to fully fund municipal energy efficiency measures with at least a 12-year payback of the principle including the LED street light replacement project and other municipal energy efficiency projects. All municipal buildings should receive a comprehensive third-party energy audit to identify and capitalize on all opportunities for energy efficiency, both for electricity and natural gas use.

Efficiency Smart Program Enhancement

Second, Sustainable Reserve Program funds should be prioritized to augment the City's Efficiency Smart program, which assists large and small commercial, as well as residential, ratepayers in permanently reducing their energy consumption including the following opportunities:

1. Provide additional rebates for prescriptive residential energy efficiency improvements in collaboration with Columbia Gas' Home Performance Solutions program, such as LED nightlights, furnace fan whistles, occupancy sensors, smart strips, programmable thermostats, weather stripping, air sealing, HVAC tune-up, insulation, ductless mini-splits, and heat pumps.
2. Provide super energy rebates for small commercial customers for prescriptive energy efficiency improvements such as lighting, heating/cooling, and water heating, thereby doubling the rebate received from Efficiency Smart.

Community-Based Initiatives

Third, Sustainable Reserve Program funds should be prioritized to fund community-based initiatives such as:

1. Upgrade or complete replacement of electrical systems, installation of heat pump and on-demand water heating, LED lighting, and consideration of solar PV on pavilion roof on Underground Railroad Center.
2. Implement fuel switching from fossil fuels to electricity employing perhaps two criteria: a) the switchover is estimated not to significantly increase cost to the ratepayer in the near term future and b) the switchover reduces the community's reliance on fossil fuels so as to promote the City's commitments to become a climate positive community. For example, replace gas hot-water heaters with heat-pump or on-demand electric hot-water heaters, replace gas heating with mini-split heating and cooling, and promote electric vehicles for transportation by installing more charging stations.
3. Install LED lighting, on-demand water heating, mini-split heating and cooling, and occupancy sensors for lighting at the Hamilton Street Rec Complex.
4. Expand OMLPS tree planting program to increase canopy cover throughout the City thereby passively reducing air temperature by shading and evaporative cooling, and sequestering CO₂.
5. Improve bicycle and pedestrian infrastructure including additions to bike path thereby promoting walking and bicycle riding for recreation and transportation thereby reducing use of fossil fuels for transportation.
6. Fund the additional cost of plug-in hybrid and all electric vehicles above the cost for a standard model for municipal departments purchasing new vehicles.

7. Weatherize income-qualifying homes in Oberlin by combining Columbia Gas weatherization programs (Warm Choice and Home Performance Solutions) with a super energy rebate program, thus making weatherization free to homeowners and thereby reduce heat trapping gas emissions significantly.
8. Provide low or interest free revolving-loans for Sustainable Reserve Program supported projects.

PUC Recommendation – Staff Comments

The focus of the PUC recommendation is to financially support the SRP program through the deposit of perhaps 85% of net REC proceeds. The PUC has recommended the remaining 15% of net proceeds be used for the betterment of the community but has not yet defined what that means or proposed uses. Staff comments will focus primarily on deposit of proceeds to the SRP.

REC Revenue Update

As City Council recalls, OMLPS executed REC transactions for the calendar years' 2012 through 2014 and realized net proceeds of \$991,195.50. OMLPS recently completed execution of REC transactions for estimated REC production from the City's four (4) renewable/carbon neutral power supply contracts for the calendar year 2015. Based on REC sale and replacement purchase prices, OMLPS expects to receive net proceeds of nearly \$776,000 for the calendar year 2015; thereby, increasing total proceeds to \$1,767,000. No REC transactions have been consummated for 2016; however, if REC prices hold steady, it is possible that net proceeds from REC transactions could approach a total \$2,500,000 by the end of 2016.

SRP Fund Balance

To date, the SRP fund has a balance of \$311,000. The PUC recommendation of perhaps 85% of REC revenues to be deposited to the SRP fund would result in an additional \$1,500,000. When coupled with REC sales to Oberlin College, the fund would be well in excess of \$1,825,000 by the end of 2015 and has the potential to be nearly \$2,500,000 by the end of 2016. To put this figure in perspective, the OMLPS capital reserve account had a fund balance of \$1,889,000 at the beginning of 2015. This account is used for large capital projects and equipment purchases for the entire electric utility operation.

Municipal Facility Energy Efficiency

The PUC recommendation sets to prioritize the use of Sustainable Reserve Program funds for municipal energy efficiency including LED street lights and other municipal facility projects identified through a comprehensive third party audit. As City Council is aware, 25% of the City's HPS cobra-head street lighting system will be converted to LED by the end of 2015 as part of utility's ongoing LED street light capital improvement plans. Staff has proposed that the LED street light conversion project continue to be part of the OMLPS capital spending plans with a goal of replacing 424 HPS cobra-head fixtures using **in-house** labor over a 3 to 4 year period. Based on updated pricing, new and more efficient LED technology and the utilization of in-house labor, the project equipment cost is \$142,695.50 with a payback of about 4 ½ years. The proposed 2016 OMLPS capital budget includes \$50,000 for continued transition to LED street lights.

In an effort to develop a reasonable basis for municipal facility efficiency saving opportunities and investment beyond the LED street light project, staff reviewed actual municipal consumption in 2014 and developed savings estimates based on a set of assumptions. In 2014, municipal facilities consumed 4,409 megawatt-hours of electricity representing 4% of the City’s total electricity requirements. The City’s retail electric customers paid \$316,125.30 for the municipal electric use. The average residential customer’s share of this cost was \$29.10. Approximately 95% of the municipal consumption was used by the following 16 facilities shown in table below.

Municipal Facility	Electric Consumption (MWH)	Enterprise Fund (Yes or No)	Available MWH for Efficiency Measures
Wastewater Plant	1,037	Yes	
Street Lights	800	Yes	
Power Plant	793	Yes	
Water Plant, Pump House and Towers	604	Yes	
City Hall	323	No	323
General Maintenance Facility	174	No	174
Fire Station	113	No	113
Electric Switch Station	79	Yes	
Old City Hall	73	No	73
Technical Services Facility	44	Yes	
Oberlin Road Substation	35	Yes	
Cemetery Building	33	No	33
Electric Warehouse	29	Yes	
Electric Administration Facility	27	Yes	
Butternut Road Substation	19	Yes	
TOTAL	4,183		716

Each facility has implemented a variety of energy efficiency, renewable energy measures over the past decade including projects such as:

- Building Lighting Retrofits
- Building Fluorescent Tube to LED Lighting Conversion Projects
- Building Envelope Improvements
- HVAC improvements including installation of mini-split heat pumps
- HPS to LED street light conversion projects
- Installation of Variable Frequency Drives for motorized equipment
- Building Occupancy Sensors
- Installation of Water Recovery and Water Saving Device Projects
- Green Roof Project (Fire Department)
- Rooftop PV Solar Installations (Electric and Fire Department)

Staff assumed that Enterprise Fund facilities would continue to fund efficiency improvements through their respective utility rates (e.g. a variable frequency drive installed at the Wastewater Plant be paid by customers using the wastewater system rather than retail electric customers). Based on that assumption, staff estimated remaining facilities would offer 716 megawatt-hours available for energy efficiency measures. For the purposes of estimating a reasonable level of investment into municipal facility efficiency, staff assumed electricity consumption could be reduced by 25% or 179 megawatt-hours at a cost of \$45.00 per megawatt-hour over a typical life of an installed efficiency measure for 12 years. These assumptions result in a total investment of \$96,660 for municipal efficiency projects. Saving 179 megawatt-hours would reduce the annual costs for municipal electric consumption by \$1.00 for the average residential customer.

In August, Efficiency Smart representatives performed a walk-through audit of several municipal facilities to review efficiency work completed and identified additional cost-effective efficiency measures. Efficiency Smart provided a draft audit report which identified efficiency measures primarily focused on lighting improvements at a total expected cost of \$50,000 excluding the LED street light project. Staff has invited Efficiency Smart to walk-through some additional facilities and issue a final report.

Efficiency Smart Enhancement

As a second priority, the PUC recommendation envisions the use of SRP funds to enhance the City's energy efficiency program, Efficiency Smart, through the expansion of rebates and incentives to retail electric customers, in particular residential and small commercial customers. The City's retail electric customers have invested \$765,870 in the Efficiency Smart program for the period of 2011 through September of 2015. The results of the program reflect that efficiency services to the City's largest electric customers have yielded the greatest energy savings and lowest cost per megawatt-hour saved. Energy savings and costs per megawatt-hour saved for residential customers and small commercial customers have demonstrated that cost-effective efficiency savings is much more difficult to achieve given the level of program participation and energy efficiency opportunities for these types of customers. To illustrate, the cost per megawatt-hour saved for the Efficiency Smart program per customer classification for the period of 2011 to 2013 is shown below.

Residential Customers - \$51.00 per megawatt-hour saved.

Small Commercial Customers - \$68.88 per megawatt-hour saved.

Large Commercial Customers - \$6.35 per megawatt-hour saved.

(The City's average cost per megawatt-hour purchased was \$67.00 in 2015)

While energy efficiency remains a vital and core customer service, in staff's opinion, additional incentives and rebates for residential and small commercial customers may not be the most cost-effective approach to consumer energy efficiency engagement.

Community-Based Initiatives

As a third priority, the PUC recommendation envisions the use of SRP funds for various community-based initiatives previously described in this report. The fundamental question for City Council to consider is whether it is reasonable and/or appropriate to fund community-based initiatives from net

proceeds derived from REC transactions with 3 Degrees. REC proceeds are the monetization of RECS purchased and paid for by the City's electric customers for the sole purpose of transitioning the City's power portfolio to renewable/carbon neutral sources of electricity. Staff maintains that OMLPS, as a non-profit, municipal electric system, should expend its funds for activities and initiatives reasonably related to the purpose of the municipal electric system.

Conclusion

Staff looks forward to the work session with City Council and the PUC to discuss these important policy issues.

/sd

cc: Eric Norenberg, City Manager
Council Appointees
Members of the Public Utilities Commission